A Comparative Study of Cognitive and Non-Cognitive Personality Dimensions of Visually Impaired Students Studying in Special and Integrated Educational Settings

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C E R T I F I C A T E

This is to certify that the thesis entitled , "A Comparative Study of Cognitive and Non-cognitive personality Dimensions of Visually Impaired Students Studying in Special and Integrated Educational Settings", has been completed by Mr. Haseen Uddin under my supervision and guidance. The work is an original contribution to the knowledge in the area of certain cognitive and non-cognitive personality factors of visually impaired children. It may be considered for the award of the degree of Doctor of Philosophy in Education.

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(HASEEN UDDIN)

C O N T E N T S

CHAPTER - I

I N T R O D U C T I O N

Even when there were no measures to identify the hidden treasures of human potentialities, the blinds' calibre, exhibited in different fields of arts and sciences, and not only that, even in fine arts and architecture, was enviable even to their sighted competitors of the field. Perhaps it may be surprising for some, if not for all, that one of the wonders of the world, the Taj Mahal at Agra, was a product of the creative power of a blind architect, Ustad Isa, just to quote one example. The prolific writer of the famous classics, Iliad and Odyssey was a Greek blind poet, named Homer and the writer of "Paradise Lost" and "Paradise Regained" known as one of the greatest poet of English literature was no other man but the adventitiously blind Milton.

Setting aside the colossal figures of the classic and the old, the Greek Homer, the English Milton and the Indian Hindi poet Surdas, the world feels very much indebted to the contributions of Miss Hellen Keller, who opened the flood gates of new life and hopes for the blinds. The service she rendered to humanity, specially to the blind lot, is worth thousand

laurels. She let the blind shed away tneir feeling of worthlessness and realize the pinnacle of glories the blind can reach, enjoy their achievement and contribute creatively and productively towards the progression of their society and eventually towards the whole humanity.

Now when the objective and the scientific measures have been developed to discover the hidden Milton's and the sleeping Hellen Keller's among the neglected lot of the blind for whom another Gray is needed to write some more elegies on the country churchyards - these measures are generally not applied to benefit from the best in man, unfortunately if he , she falls in the big chunk of the population of the unsighted 28 million in the world and 3.4 million in India (Park and Park, 1991). However, the brilliant stars among the blind are still illuminating innumerable horizons of knowledge, arts, music, sciences, and literature in different parts of the world and in different walks of life, just to name a few - Louise Braille, a French blind teacher who developed the braille alphabet, by which blind can read and write; Dr. Taha Husain, former Vice-Chancellor, Jama-e-Azhar University, Qahira and Ex-Minister of Education in Qahira; Dr. Santog, Supreme Court Judge in Germany; Mr. Sadan Gupta who was elected as member of parliament from Bengal state, 1957; Sheikh Omar Abdel Rahman, resident of Egypt, a spiritual head of an Egypt - based militant Islamic sect called the Islamic group and an orator of international repute; Mr. Roongta, advocate in Supreme Court and Secretary National

Fedration for the blind - branch of Asian Blind Union; Dr. Fatima Shah of Pakistan, President of International Federation of the Blind and President of Pakistan Federation of the Blind; Mr. Ravendra Kumar Jain, Music Director of a high calibre; Mr. Satish Bhootani, Radio artist; Mr. J.L. Kaul, General Secretary Confedration of the Blind; Mr. Johnson, Director of the training centre for the Blind, Ludhiyana; Mr. Shabbir Masoodi, Advocate in Kashmir; Dr. Tasadduq Husain and Dr. Piyush Mathur, Reader, A.M.U. Aligarh; Dr. S.R. Mittal Reader, Jamia Millia Islamia, New Delhi; Mr. Tamboli, Reader in N.C.E.R.T. (special education); Mr. V.P. Verma, Reader, Delhi - University, Delhi; Mr. A.K. Mittal, Former Director and Principal J.P.M. Senior Secondary School for the Blind, New Delhi, Mr. Shamshad Husain Ansari, Advocate in High Court, Allahabad and Vice-President, U.P. State Branch National Association for the Blind; Mr. M.M. Mohammad, Public Prosecutor in Trivendrum; Dr. Shiv Jatan Thakur, a blind scholar and member Bihar Public Service Commission, for whom State government had recommended for the Award of Padam Shree for his efficient functioning as a member of commission; Late Syed Husain Qasmi, who worked on mathematics, specially on abacus (braille); Sheikh Abdullah M.Al-Ghanim, Vice Minister in Saudi Arabia and President of world blind union; Sir John Wilson of England, President, Common-Wealth Society for the welfare of the blind; Mr. Lal Advani, Former Director of National Institute for Visually Handicapped, Dehradun, Director N.A.S.E.O.H, B.R.A. New Delhi; Consultant of

Government of India in VIIIth Plan, Special Officer for handicapped Government of India, President, Asian Blind Union and Editor, Braille International; Mr. Suresh C. Ahuja, executive officer National Association for the blind; Dr. Rajendra T. Vyas, General Secretary National Association for the Blind; Mr. Jagdish K. Patel, Director Training Centre for the Blind, Ahmedabad and President, Blind Men's Association, Ahmedabad.

The variety of fields, and also the eminence, the blind have reached point to the complexities a research worker will be exposed to, if he ventures to explore the hidden treasures of cognitive and non-cognitive abilities among the blind. As such it seems very necessary to clarify certain problems of the field at the conceptual level at the very outset.

A legally blind is one who can see only the top letters on snelin Chart from a distance of twenty feet (6 m) with his or her eye with best correction or who has visual acuity of 20/200. A normally sighted person sees at 200 ft. (60 m). They are also considered legally blind if their peripheral vision is reduced to an angle of 20 degrees or less, such type of vision is known as "gun barrel" or tunnel vision. Children having tunnel vision can see material printed on regular size type. Blindness is the total loss of ability to see or the partial loss of vision that eye-glass can not correct sufficiently for the purpose of daily life.

In India, over 80,000 children go blind every year and 50 per cent of them die and the remaining 40,000 remain sightless for the rest of their lives, as reported by Mr. Alan Johns, President of the International Agency for prevention of Blindness (IAPB) who visited India in 1991 (The Hindustan Times, Jan 12, 1991).

The major causes of blindness are malnutrition, infectious diseases and injuries. If a woman has a german measles (Rubella) in the first few month of her pregnency, the chances of vision problem in new born baby are considerably high. Among the major eye diseases causing blindness in adults are glaucoma, diabetic retinopathy, semile cataracts, and senile retinal degeneration.

Regular examinations of children by an opthalmologists or an optometrist, medication and a change in diet, prompt treatment for an eye injury, vaccination for rubella disease may prevent blindness upto a great extent. In cataract, removal of intra-ocular lens is the only method for treating it. In some cases blindness is due to opacity of cornea, by transplanting cornea of donated eye, the normal vision may return. Congenital blindness may be caused by gonorrhea organisms in the mothers uterus, it is now prevented by placing a solution of silver nitrate in the eye of all new born infants.

A factor which adds to the gravity of the problem is that blindness limits the range and variety of experiences,

physical mobility and interaction of the individual with his environment. It is a major factor that does not allow majority of the people to view the personality make-up of the blind in an objective manner.

The work in the field of handicapped in general and the blind specifically being still in the age of infancy, different types of experimentation are being carried out the world over, by the conscientious welfare institutes. The programmes for educating the visually impaired and blind are running all over the world. The children usually educated in special schools - until the begining of the 20th century, residential schools in the United States provided education for the visually impaired and blind children; three such schools founded between 1832 and 1833 are still serving the blind. Till the late 1970, 30% of visually handicapped school age population in the United States was enrolled in 54 residential schools for the blind (Lexicon, p.331).

In India, where there were only 32 schools for the blind in 1947, the number has now gone upto around 300. However, the number of schools is still insufficient as only 15,000 students are able to get education through these schools. (Hindustan Times, May 27, 1993).

Amadou - Mehtar M' Bou Director - General of UNESCO, spoke over the segregation of disabled persons in special school, "very often the society even tends to deliberately

ignore them, preferring to reject them, to treat them as outcasts, to shut them up in special institutions whose principal purpose is to allow society to forget them - whereas what the handicapped need on the contrary, is to get out of their ghettos, assert themselves as individuals in their own right, participate fully in social and cultural life, and perhaps even become essential contributors to productive activity". Isolation is one of the serious aspect of the oppression of disability. (Sanyal B.C., et.,al., 1985)

Scientifically, it has been established that disabled children with mild handicaps make better progress academically and psychologically, if they are given an opportunity to study with normal children in regular classes. In India such types of arrangement is known as integration and in U.S.A. it is called as main streaming. In India, a revised scheme for Integrated Education for Disabled Children was started in 1987 - 88 to integrated disabled children to common school. The full financial assistance is given by central government to state government / U.T. administrations / voluntary organisations for necessary facilities for disabled children in the school. Financial assistance is also given to the selected universities / institutions through U.G.C. to run training courses in special education for teachers of handicapped children. Training facilities are also provided by N.C.E.R.T. and four regional colleges of Education. The scheme of Integrated Education for disabled children is an operation in Andhra Pradesh,

Bihar, Goa, Gujarat, Haryana, Jammu and Kashmir, Himachal - Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Nagaland, Orissa, Punjab, Rajasthan, Sikkim, Tamil - Nadu, Uttar Pradesh, Delhi, Andman and Nicobar Islands and Daman and Diu. At present 30,000 disabled children are being enrolled under this scheme (India, 1992, p.88).

Traditionally, blind people were educated through Braille, but the pattern is changing. As there are many people who are partially blind, we need to have things like powerful magnifiers, overhead projectors and closed-circuit televisions, as reported by Mr. Lal Advani.

There are about 35 million disabled people in India (India,92) and only 10% of them are covered with various rehabilitation services. This is primarily due to the fact that concerted efforts in this direction were started only since 1981 - The International year of the Disabled. Financial out lays are yet to rise to match the problems of the handicapped.

Government of India provided schemes for the welfare of the disabled like, free aids and appliances to the handicapped assistance for voluntary organisations, working for the welfare of handicapped upto an extent of 90% of the expenditure, scholarship to all handicapped students from class IX and beyond, and a number of concessions and facilities have been provided including 3% reservation in group C and D posts in Civil services

under central government for the visually, hearing and orthopaedically handicapped. About 400 organisations receive grants under one scheme or the other for welfare programmes of the disabled.

President of India gives National Awards instituted by the Ministry of Welfare to best employers of the handicapped/ employees/self employed persons in the Government, public and private sectors. Placement Officers of the handicapped are also eligible for the awards are given in the categories orthopaedically, visually, hearing and mentally retarted persons and leprosy cured. Technology awards for the welfare of handicapped are also presented every year for the best technological inventions in three types of disablities, namely, orthopaedically handicapped, speech and hearing handicapped and visually handicapped.

Ms Indira Kumari, Tamil Nadu Social Welfare Minister, said that state government proposes to setup a National Institute for the blind on the lines of the one in Calcutta and Hyderabad and Chief Minister of Andhra Pradesh, Mrs. Jai Lalitha has written to the Union Welfare Minister for setting up the institute (The voice of FOD, Jan-June,93, p-16).

From the 183rd birth anniversary of Louis Braille, January 4, the Blind Relief Association has introduced a computerised braille text-book printer for producing braille

books. The conventional system of transcription and printing of braille books has been found very slow and quite expensive. With the result the students were facing great difficulties in getting text-books (The voice of FOD, Jan-June 93, p-13).

Mr. Milan Das, a senior research Officer at National Institute for Visually Handicapped, Dehradun invented a Geometry-kit-cum-braille slate, the first of its kinds in the country. It will help the visually disabled learn to draw geometrical figures and write braille. Mr. Milan Das was presented National Technology Award by the President of India, Dr. S.D. Sharma.

In India itself the Ministry of Health and Family Welfare is to set up a National Organisation dedicated to the cause of combatting blindness. The organisation is to implement Rs. 550 crore project to cover 12 million cases of cataract for which funds are coming from the World Bank. Blindness affect millions in the world and India has one of the largest concentrations in the World (The voice of FOD, Jan-June, 93, p.13).

It is certainly encouraging that different types of activities are being introduced for boosting up the morale of the blind children, The National Association for the Blind, New Delhi in collaboration with the Car Racing Trust, sponsored by Ceat Tyres, organised a car rally on the 4th April, 1993. (The voice of FOD, Jan-June 93, p.12).

March 21, 1993 was observed as "World Disabled Day" to increase awareness of responsibilities among people to ensure a happy and bright future for those whose present has been made difficult by their circumstances and disability.(Times of India, March 21, 1993).

It is a sanguine sign that the blind here now attracted the attention of the humane research workers who have started exploring the slumbring powers of the untrodden personalities of the blind, though the field is at a very early stage of its development rather at its infancy stage yet some valuable works and their findings may be quite interesting to note for any one and specially for the present worker who wants to explore further and identify different abilities and characteristics of personality on both the cognitive and non-cognitive levels.

On Intelligence there was significant difference between blind and sighted children (Tillman, 1967; Smits,1976; Vanderkolk, 1982) and Singh (1985) found no difference between blind and sighted on sub-test of WAIS-R verbal(Hindi). Vanderkolk,(1977) also explored that age and level of education of visually impaired is related to intelligence test scores. Eaves and Lonof (1970) found that blind had higher I.Q. scores than sighted.

On tactual performance the blind were better than sighted (Gottesman, 1971; Rai,1982) but Kool and Rana (1979) found that blind subjects were poorer than sighted on tactual

performance. On tactual performances the one year old children preferred satin 2 years old kitchen scrubber and 3 years old needle point canvas. Adult preferences were inversily related to children's preferences.

Blind and sighted were similar on perception (Gottesman, 1971); visual imagery and visual experiences may not be necessary for tactile perspective taking (Heller & Kennedy, 1990). The blind mannerism had specific neuro-pathological substrate (Jan, Groenveld and Sykanda, 1990). The blind subjects identified pictures with same ease as blind folded sighted subjects and Memory performance was similar in both the groups. (Pring, Freestone and Katin, 1990).

The studies on divergent thinking were also conducted and brought into light the fact that blind and sighted did not differ on divergent thinking and the sight and day school blind maleswere more divergent than their female counterparts (Tisdal and Black Hurst, 1971). The results of another study done by Kamila (1984), indicated that the normal were more fluent, flexible and original than the blind counterparts.

On convergence principle, kennedy and cambell (1985) found that convergence was evident in blind people in two functionally different activities haptic spaces reaching and walking.

Anderson & Eisher (1986) found that nominal realism, as an attribute of operational thought remained a characteristic of blind subjects thinking longer than it did for sighted subjects.

Blind and sighted subjects were similar on the development of cognitive abilities. (Barlow,1986; Jurrmaa,1984). The cognitive development in blind occurs with an acceleration between the age of 7 - 12 years (Jurrmaa,1984). 1 - 4 years developmental lag was observed in blind children as compared to sighted and partially sighted children. Blind children made developmental delays at the age of 11 . (Wan-Lin, 1986) visual impairment affects the total process of gathering and exchanging information and also affects the motor skill, language development, cognitive development and social skills (Jan, sykanda and Groenveld, 1990). Blind children differing greatly from both sighted and partially sighted on conservation tasks - (Wan-Lin, 1986).

A core knowledge of spacial system is required for both blind and sighted to use maps. (Landan, 1986). On reproducing kinesthetically based movements, congenitally blind, adventitiously blind and sighted subjects performed equally good. (Arnold, 1988).

There were minor differences in the self-concept of blind and sighted subjects. Self-concept in area specific in

nature and school experience affects both sighted and blind children in a similar way. (Obaikor, 1986).

On short term retention, Singh (1984) found that the sighted subjects reduced the effect of response biasing on pre-selection of target, while blind did not alternate the effects of response biasing. On digit span sub-test, congenitally blind and adventitiously blind differed significantly. (Singh & Sharma, 1984).

Totally blind were more confident about their performance on short term recognition memory than the partially sighted. The blind subjects recognized auditory stimuli better than the partially sighted. The total blind subjects were superior in auditory - memory training. (Pozhar, 1985).

Both students (blind and sighted) and teachers had an over all positive attitude towards micro-computer and very positive attitude towards instructional programme (Sanford,1984). Lauer and Mowisaski (1986) discussed the new profession of prescribing, interfacing, and training people in the use of computer aids for visually impaired persons and the cost of providing computer access to visually impaired persons. In the development of word processing skill in the visually handicapped students, the conceptual framework activities at the project site-a module developed to introduce students to Braille-Edit word processing system were brought to light (Koenig, Mack, Schenk and Ashcroft, 1985).

Visual impairment obstructs the achievement of conservation. (Tait, 1990) The blind children were not as successful as the other children (sighted) at hiding activity. (Bigelow, 1991).

It is very interesting to note that a recent study discovered an edge in achievement for the blind as compared to the sighted. The achievement of blind children in Hindi, English and Social Sciences was higher than the sighted peers in an integrated educational setting. (Singh, 1984).

As far the findings on the non-cognitive personality aspect of the blind, the adjustment of blind and sighted subjects was similar (Hamed, 1965); Emotional and social adjustment of blind and sighted children was found to be almost the same. There was no significant difference on adjustment between younger and older blind subjects. No significant difference was found between male and female adolescents in social and emotional adjustment (Kaur, Singh & Jain, 1978); Qadari & Husain, 1982, found that the blind were from psychological broken homes and suffered emotional maladjustment. The blind subjects felt that the defect of vision adversely affected their education, employment, mobility and socialization. (Nemshick, McCay and Ludman, 1986). Visually handicapped were poorly adjusted in emotional, social and educational ground, they were also poor in their total adjustment (Sarita & Sharma 1987); Blind infants exhibited a more limited repertoire of facial expressions and less

responsiveness. They less frequently attempted to initiate contact with their mothers or comply with simple request and prohibitions than the sighted (Troster and Brembring, 1992); Blind possessed higher level of anxiety than the sighted (Mittal, 1988); while the finding of Wilhelm (1989) revealed that totally blind and low vision scored the same on fear and anxiety scale, subjects had the tendency of fear for bodily injuries; Sighted and blind were almost similar on personality measures; The perception of family environment in the blind subjects was highly negative while in sighted, it was highly positive; Age, education and perceived environment of family had an influence on the development of personality of both blind and sighted subjects (Mittal, 1988); Gupta (1988) found no significant difference on perceptual and motor performance of high and low scoring subjects on 16 personality factors and on an excitability rating scale.

Many visually impaired children had fear and ambivalence on visual prostheses and aids and they often reject their uses, (Freedman, 1985). No clear and definite changes were evident in the subjects, behaviours on treatment programme (Pilazesi, 1986); Luiselli (1985) found that programme that combined responses - contingent prompting and reinforcement procedures was successful in increasing the quantity of task that each blind severely retarded completed. Lack of assertive behaviour developed a sort of helplessness with a structured intervention resulting in improved assertiveness skills, blind or partially sighted

individuals could increase their effectiveness in communicating with others and they could also control their emotions. (Harrell and Strauses, 1986).

The locomotor of blind children was related to their development of object performance, despite developmental delays in both abilities, locomotion and object reach. (Bigelow, 1992).

The disabled subjects including blind also follow the same general pattern of able bodied youth subjects. (Sherril, et.al. 1990); blind, orthopaedically handicapped and hearing impaired subjects were poor in self-concept in comparison to normal children, (Mishra, 1990). It was also found that there is a relationship between sensory impairment and the frequency and severity of self-injurious behaviours. (Rodringues, 1982).

The presence of stereotypic behaviour in all blind children is a fallacy. Where the impairment is in the visual tract of the central nervous system, stereotypic behaviours in blind children were performed. (Iverson, 1984).

Home sickness caused by loss of sight of veterans impeded the rehabilitation, and management in a residential settings. (Taylor, 1986).

Thus, the above findings, though very encouraging for the blinds in most of the cases, are still inconclusive yet, at the same time, are very challenging for the research workers to

delve deeper and explore further the reservoir of potential of the blind in both cognitive and non-cognitive domains.

The present study is thus a humble attempt in this regard, **"A comparative study of cognitive and non-cognitive personality dimensions of visually impaired students studying in special and integrated educational settings".**

The study has been taken up with the following objectives :-

Differences On Intelligence :

1. To explore the differences on intelligence between the blind students studying in the special school environment and the blind students studying in the integrated school environment.

2. To find out the sex-wise differences on intelligence between the blind subjects in their special and integrated school environment.

3. To identify the inter-sex differences within special school environment on intelligence.

4. To measure the inter-sex differences on intelligence within the integrated school environment.

Differences On Creativity :

1. To find out the differences on creativity between the blind students studying in the special school environment and the blind students studying in the integrated school environment.

2. To identify the sex-wise differences on creativity between the blind subjects in their special and integrated school environment.

3. To explore the inter-sex differences within special school environment on creativity.

4. To measure the inter-sex differences on creativity within the integrated school environnent.

Differences On Personality :

1. To identify the differences on personality between the blind students studying in the special school environment and the blind students studying in the integrated school environment.

2. To explore the sex-wise differences on personality between the blind subjects in their special and integrated school environment.

3. To measure the inter-sex differences within special school environment on personality.

4. To find out the inter-sex differences within the integrated school environment on personality.

On the basis of the work done so far in relation to different behavioural and personality dimensions of the blind, as well as on the basis of the experience of the present worker for a considerable period both as a classmate and as a research worker in the company of the blind, it is hypothesized that :

1. There shall not be very significant differences between the blind students studying in the special school environment and the blind students studying in the integrated school environment on the measure of intelligence.

2. Comparisons between the boys in special and integrated schools as well as the girls in special and integrated school environment will not reveal significant differences on intelligence.

3. There may be some differences on intelligence between the male and female subjects in both the school environment, special and integrated.

4. On the measure of creativity it is expected that the blind students in the integrated school environment will be more creative than their counterparts in the special school environment.

5. The boys and girls in the integrated school environment will exhibit a higher level of creativity than their counterparts in the special school environment.

6. The inter-sex comparisons within the same school environment will also show the superiority of girls over the boys on the measure of creativity.

7. It is expected that on personality characteristics there shall be some differences between the blind studying in the special school environment and those studying in integrated school environments.

8. There may be a few differences of personality characteristics between the boys of the two school environments as well as the girls of the two school environment, i.e. special and integrated.

9. There shall be no significant differences in personality characteristics between the boys and girls if compared in the same school environment.

The next Chapter deals with the review of related studies.

CHAPTER II

REVIEW OF RELATED STUDIES

As mentioned in the previous Chapter the present study aimed at identifying the differential cognitive and non-cognitive personality factors going with the blind subjects studying in the special and the integrated educational settings. As such it seems necessary to briefly describe the related studies in both the domains of personality, cognitive and non cognitive for a better understanding of the present problem.

Studies on Cognitive Factors :-

Eaves and Lonoff (1970) carried out a study on 40 blind and 40 sighted subjects, both the groups of subjects were compared on tactual performance, the I.Q. was positively correlated with tactual performance test scores for the no vision group and one tactual performance test variable for those with guiding vision. The blind children had a higher mean I.Q. score than sighted on those with guiding vision.

Gottesman (1971) studied on Piagets' developmental schema of sighted children with that of a group of blind children. 15 congenitally blind subjects were compared with 30 sighted

subjects on the performance. 15 out of 30 sighted subjects were not permitted to use vision, they were blind folded in an experimental of haptic perception modeled by Piaget and Inhelder. The results showed no significant differences in the discrimination of blind was found between blind and sighted perception. Blind subjects performed more correctly in tactual discrimination than sighted group (blind folded). It was concluded that the developmental schema of the blind and sighted subjects was similar on haptic perception.

Tisdall, and Black-Hurst (1971) carried out a study on divergent thinking in blind children. The sample consisted of 76 sighted children and 76 blind children in residential schools and 76 blind children in day school programmes. The result revealed that (a)blind children exhibit more verbal fluency than do seeing children, (b)Visual familiarity with the environment allows seeing children advantage over the blind in a small number of divergent thinking activities, (c)Blind and seeing children generally do not differ in the ability to think divergently, (d)Blind children in residential and day school setting are equally capable of thinking divergently and (e)Seeing and blind day school males tend to be more divergent than their female counterparts.

Smits, Mommers, (1976) investigated on the differences between blind and sighted children on WISC verbal sub-tests and found significant differences on the measure of intelligence between blind and sighted children.

O'Keefe and Stuchel (1973) aimed at compairing auditory perceptual abilities of legally blind and sighted children with varying hearing and speech abilities with different mental ages, learning abilities and orientational abilities. It was inferred that blind and sighted children differed in auditory processing skills, the inter and intra-personal auditory abilities increased with the increase of mental age, learning ability did not affect a child's perceptual ability. Inappropriate articulation affects a child's inter and intra-personal auditory skills.

Vanderkolk,(1977) carried out an investigation on the demographic etiological and functional variable related to intelligence in the visually impaired subjects. The results showed that age and level of education of visually handicapped subjects were related to verbal intelligence test scores.

Kool and Rana (1979) conducted a study on tactual short-term memory of blind and sighted children, a sample consisted of 48 subjects comprised of 20 blinds and 20 sighted as experimental group and 40 blind and 40 sighted as control group. It was concluded that the performance of blind subjects was poorer than sighted subjects on tactual short term memory. It was also noticed that blind subjects initially did better than the sighted but in delay in recall period,the performance was poorer than the sighted subjects.

Correa,(1982) conducted a study on young blind, severely/ profoundly retarded children.Significant delays have been noted

in the mannual exploratory behaviour of young, blind, severely/ profoundly retarded children. The effect of a graduated - prompting treatment package on the development of reach-grasp responses were investigated in three experiments. The graduated-prompting treatment package consisted of three components: graduated prompting procedures, contingent social praise and toy manipulation.

The findings suggested that the graduated-prompting treatment package was effective in developing reach-grasp responses in three blind, severely / profoundly retarded children. Further for one child, the effects were durable over repeated application of the package, but were not maintained when the treatment was withdrawn. In addition for another child, the effects of training reaching and grasping responses generalized to reaching and grasping toys that were presented without sound, they were given only the verbal instruction.

Rai, G.C.(1982) conducted an experimental study of sensitivity and learning efficiency of blind and normally sighted children. The study was conducted with two groups of eight grade children-one group of blind subjects and the other of normally sighted subjects (with 20 subjects in each group) matched in respect of age, socioeconomic status, scholastic achievement and nature of school. Auditory sensation, tactile sensation, and learning efficiency of both the groups of subjects were assessed by using the relevant tools. It was

revealed from the study that auditory and tactile sensation were significantly better in blind subjects than in normally sighted subjects. On learning efficiency the two groups were similar, they did not show any difference.

Vanderkolk (1982) carried out an investigation on a comparison of intelligence test score patterns between visually impaired and the sighted. It was concluded that visually handicapped did not differ in some substantial way on intelligence sub-test scores than sighted.

Elizabeth (1983) investigated upon synthetic Vs natural speech and comprehension in blind and sighted adults. This study investigated Kurzweil Reading Machines Model 3 in terms of listening comprehension. 30 blind and 30 sighted individuals at three verbal ability level as determined by the Wechsler adult intelligence scale vocabulary sub-test.

As ANOVA indicated significant main effects for speech conditions and verbal ability. Pearson Product correlations were significant for the same variables. Spearman rank order correlations on the mean scores across test selections to synthetic and natural speech groups indicated a relatively high degree of agreement between these two scoring patterns, i.e. synthetic Vs natural speech and comprehension.

Juurmaa (1984) investigated on the riddle of the rate of mental development in the congenitally blind. Cognitive and

emotional aspect and discussed the mental development of the congenitally blind and noted that total congenital blindness entailed a lack of all information, images, and experiences based on vision restricted ability to control the inter-relationships between self and environment. These shortcomings cause an apparent developmental retardation during infancy and early childhood, such as, object constancy develops with slow speed in blind children and their dependence is stronger and prolonged than usual. However, the blind children attain development with acceleration between the ages of 7 and 12 years. There were no differences in cognitive abilities between the congenitally blind and the sighted. It was concluded that integration of instruction of the blind with that of the sighted was a significant step forward.

Erin (1984), investigated on question frequencies and types in the language of visually impaired and sighted children. The study examined the frequency of questions and the question types used by blind, low vision and sighted children. Twelve subjects from each vision group were included in the study. A language sample from each child was recorded as the children were examining house-hold objects. When a child had produced 100 utterances, the number of questions was counted and analyzed using an analysis of variance.

The results indicated significant differences in question frequencies of blind / sighted and low vision / sighted children.

There was also a significant difference in question frequencies of the oldest and youngest group according to an analysis of variance and a scheffe post hoc comparison.

Kamila (1984) carried out a study on creativity thinking abilities of blind school children.The sample consisted of 50 blind and 150 normal students,were randomly selected from class VIII, IX and X from different schools aged from 13th to 19th. The result revealed that :

1. Normal children were significantly more fluent in Game No. 1 and Game No. 3 than the blind children who were significantly more fluent in Game No. 2 than the normal children.

2. The normal children were significantly more flexible in Game No. 1 and Game No. 3 that the blind children and there was no such difference in Game No. 2 between normal and blind children.

3. The normal children were more original in Game No. 2 and Game No. 3 than the blind children.

Laurel & Hudson (1984) carried out a study on relationships among five measures of survey level mental representation of space in the visually impaired. The purpose of study was to examine the relationship among typical measures of survey level mental representation of space, i.e. defined as ability to derive routes or take perspective when the spatial information relative to these tasks was not previously directly experienced in the blind.

The five measures of survey level mental representation of space were administered on 48 blind adults (24 were congenitally blind and 24 advantitiously blind). It was inferred from the data analysis that the congenitally visually impaired subjects scored comparably higher to the adventitiously impaired.

Singh and Sharma (1984) conducted a valuable study on short scale I.Q. measure for the visually handicapped and found that congenitally blind and adventitiously blind differed significantly on digit span sub-test.

Singh (1984) aimed at comparing achievement of blind and sighted children studying in an integrated system. Four visually impaired and four sighted children studying in an integrated educational setting were selected for the study. It was found that achievement of the blinds in Hindi, English, Social Studies and Sanskrit was higher than the sighted children. The higher achievement of visually impaired may be the result of non-educational factors, e.g.,Psychological factor, individual factors etc.

Sanford (1984) conducted a study effectiveness of an instructional programme designed to teach visually impaired students to use microcomputers. The primary purpose of study was to field-test the programme entitled, "Instructional Modules for beginning Micro-computers and Access Technology skills. The subjects consisted of 10 legally blind braille students ranging

in age from 12 years 6 months to 18 years 8 months. There were two girls and eight boys with I.Q_s ranging from 85 to 120 as measured by standardized intelligence tests. Nine teachers from five different school programmes participated in the field testing of the modules.

The results indicated that the modules were very effective. All of the subjects in the study completed the modules activities within a reasonable length of time and reached criterion on the performance test within a reasonable number of trials. The students in the study who had I.Q_s in the borderline range required more time to complete the modules and generally required more trials to reach criterion in the performance tests than the brighter students. The younger students require less time and fewer trials than the older students. Results show, although not statistically significant for either group, that there was in over-all increase in both students and teachers' positive attitudes towards micro-computers during the study. Generally, the students and teachers felt positive or very positive about the instructional programme.

Matsuda (1985) studied on facilitating the language acquisition skill of blind infants, the author argued that parents of blind infants must understand to facilitate their child's environmental system to compensate for the deficit in their biological system and suggested to aid the infants to make the transition from sensorimotor functioning to symbolic functioning.

The suggestions were (1) Provide a consistent source of sound identification (2) expand the infants source of information, (3) become familiar with hand language and (4) engage in verbal interaction with the infant.

Koenig, Mack, Schenk and Ashcroft (1985) conducted a valuable study on developing writing and word processing skills with visually impaired children. It was a 2 years' project for the purpose of studying the development of word processing skills by visually handicapped students. Apple lle microcomputers printers, soft wares, and specialized technological aids are being used by students and teachers in Tennessee school for the blind and by the pre-service teachers at Peabody college. The conceptual framework of the projects activities at the project site and a module developed to introduce students to the Braille Edit word processing system were brought to light.

Pozhar (1985) studies on influence of long-term sensory deprivation on the recognition of verbal stimuli and of short-term recognition memory of 10 blind and 5 partially blind students at a professional school for the blind. The totally blind subjects were more confident about their performance than the partially sighted and also the blind subjects recognized auditory stimuli better than the partially blind subjects. The completely blind subjects were superior in auditory memory training.

Tulloch (1985) carried out a study on visually typical, visually atypical and down syndrome infants. Thirty-one infants

aged 4 to 20 month with average chronological age of 12.6 months were divided into three subject groups : visually typical, visually atypical and down syndrome. Measures for visual status included forced preferential looking, optokinetic nystagmus and behavioural measures were used. Information on levels of object permanence and expressive language skills were obtained from scales I and IIIa, respectively, of the Uzgiris Hunt ordinal scales of psychological Development. Additional information on expressive language skills was obtained from the Bzock-league Receptive - Expressive Emergent language scale. The results revealed (1)A relationship between intactness of binocular vision and performance on tasks measuring concepts of object permanence emerged for the visually typical and visually atypical infants (2) No support for a relationship between intactners of binocular vision and performance on tasks measuring expressive language skills was observed for any of the subject groups (3) Down syndrome infants appeared to follow a typical, although delayed, developmental sequence for object permanence & expressive language skills. In spite of being at risk for visual deficits, they showed a low incidence of problem in this area.

Kennedy and Campbell (1985) carried out an investigation on convergence principle in blind people's pointing. The 9 blind children of 5 - 14 years age and 8 blind adults were examined the ability to demonstrate the use of a convergence principle in pointing tasks. Results from domestic horizontal, manipulative - horizontal, domestic-vertical, manipulative vertical and

wall-pointing activities suggest that convergence was evident in 2 functionally different haptic spaces, i.e. reaching and walking and that the phenomenon was evident in both the horizontal and vertical plane.

Singh (1985) investigated on intelligence test score patterns of visually handicapped sub-groups. The sample consisted of 148 subjects and comprised of visually handicapped adult trainees, students and staff members of National Institute of Visually Handicapped, Dehradun. Wechsler adult intelligence scale revised (1981) Hindi adaptation was used. It was concluded that visually handicapped did not differ significantly from the sighted on sub-test of WAIS R verbal (Hindi). However, marked differences were found on digit span and arithmatic,where the visually handicapped were found to be better on digit span than sighted but they were on the lower side on arithmatic.

Anderson and Fisher (1986) studied on Nominal realism in congenitally blind children. 10 blind and 10 sighted children 3 - 9 years old responded to questions regarding the origin of object name and whether these names could be changed and inquired also whether the subjects assigned animistic qualities to the objects. The results showed that nominal realism, as an attribute of pre-operational thought, remained a characteristic of blind subjects' thinking longer than it did for sighted subjects. This finding is related to the limitation, blindness is thought to impose on children's interaction with objects and to the general delay in Piagetian cognitive development observed among

congenitally blind youngsters. Results underscored the need for providing appropriate cognitive and linguistic experiences for young blind children.

Barlow (1986) studied on the adult development of 18 congenitally blind men (aged 35 - 59 years) and concluded that blind subjects tended to develop along times similar to the sighted persons, engaging in similar developmental tasks and addressing similar critical developmental issues in the same general time frame as sighted subjects.

Bradshaw, Nettleton, Nathan and Wilson (1986) carried out a study on Tactual Kinesthetic matching of horizontal extents by the long term blind : Absence or reversal of normal left side under estimation. Ten subjects of age 26 to 55 years who were blind from infancy or childhood, laterally slid a horizontal rod within a short length of pipe located at the body mid line, until the rod extremeties were tactually kinesthitically Judged to be equidistant from the ends of the pipe. Whereas sighted subjects normally set the left extremity of the rod closer to the mid line than the right irrespective of arm posture, crossed or uncrossed blind subjects, especially those blind from birth showed trends in the opposite direction.

Obaikor (1986) carried out a study on the development of self concept in normally sighted and visually impaired students, General and visually impaired forms of students self-Assessment inventory (Muller, Larned, Leonetti and Muller,1984,

1986) was tested on 229 normally sighted and 61 visually impaired students. The areas of school life were physical maturity, peer relations, academic success and school adaptiveness. The results indicated that (a) there are only minor differences in the self concept of the groups, (b) since the visually impaired maintained higher scores in some instances, the perceptual notion that the visually impaired have low self-concept was not supported, (c) self-concept in area specific in nature at different grade levels and school experience seems to affect normally sighted and visually impaired students in similar way.

Landaw (1986) carried out a study on a 4 years old congenitally blind girls with no previous map use experience used a 2 symbol map to directionally guide her locomotion in space with successful location of objects infront of her, behind her, to her left or to her right. It was inferred from the data that a core knowledge required to use maps is a readily accessible product of a spatial knowledge system common to both the blind and sighted.

Lawer and Mowinski (1986) carried out a study on computer access by visually impaired persons. The researchers discussed the new profession of prescribing, inter-facing, and training people in the use of computer aids for visually impaired persons and the cost of providing computer access to them. Problems involved in directing screen data to a braille, speech, or large print device were identified.

Safran and Safran (1986) investigated on videotaped presentations by blind speakers as attitudinal change agents. The purpose of study was to determine whether a videotaped presentation by a blind speaker would more positively influence attitude change and information retention than would a presentation by a sighted speaker, using 89 under-graduates, As ANOVA suggested there were no significant main effects for either presenter or pretest conditions on the measures. However, there was a significant interaction between presenter and pretesting on information retention. It was concluded that the blind speakers were less effective than the sighted speaker in changing the attitudes.

Wan-Lin (1986) carried out a study on cognitive development of the visually impaired children in the Republic of China as measured by Piagetian task of conservation. Eight visually impaired children of age ranged 6 - 15 and 40 sighted children of the same age were randomly selected using a stratified constant procedure. Each child was presented individually with eight tasks of conservation including number, length, distance, substance, liquid quantity, area, weight, and displacement volume. Each task included one transformation. The subjects were identified as consevers and non-conserves for each task. (1) Discriminant analysis techniques were used to classify individuals into one of two groups (conserver, non-conserver) on the basis of age, vision, gender and residence, and to identify which variables contribute to making the classification.

(2) In the order of difficulty the eight conservation tasks were analyzed descriptively by determining the percentage of children who passed each task. (3)The percentage of children who passed each task by age level presented in table form. (4) explanations given by the children were analyzed discriptively. Responses were categorised and presented in table form. It was pointed out that (1)Age and vision were two significant variables contributing to the attainment of conservation. Younger visually impaired children were more apt to be non-conservers, (2)The order of difficulty of eight conservation tasks for the partially sighted children was more similar to that of the sighted blind children with the blind children differing greatly from both the partially sighted and sighted children. (3)A one to four year developmental lag in the attainment of eight conservation tasks was found in blind children compared to the sighted and partially sighted children, (4)Blind children made their developmental delays at the age of 11, (5)The explanations given by the conservers among the sighted, partially sighted and blind children were similar, however, the explanations given by the blind and partially sighted non-conservers demonstrated more variability than the sighted non-conservers.

Zimmerman, (1986) studied on preferred textures of objects for visually handicapped infants and young children. The purpose of this study was to determine whether severely visually handicapped infants and young children demonstrated a preference for one particular texture at 1, 2, and 3 years of age. The study

also compared teachers and parents preferences from a national 20 item texture survey with the preferences demonstrated by the subjects during free play.

The sample consisted of 22 congenitally visually impaired children from 12 to 42 months of age. Normal development was checked with the Maxfield - Buchholz (1957), Social Maturity Scale for Blind Pre-school Children and degree of visual impairment was screened with the Vision, observation Form of Infants. (Jose, Smith and Shane 1980).

The subjects were videotaped in two free-play sessions in the home or educational centre. Textures used were satin, kitchen scrubber, metallic, plush, terry, vinyl, artificial chamois and needlepoint canvas. The first year olds received the first four texture, two year olds received the first six textures and three year olds received all eight textures. A letter "H" shape was used in the first session and a milkbone shape in the second session. Raw scores were converted to percentages for total time for each play session. Frequency distributions and Mann whitney U test were used to examine the relationships within data. The 't' value was calculated for knowing the significance of difference between the parents and teachers survey results at the .01 level. Results indicated that the children, one year old, preferred satin; 2 years of age preferred kitchen scrubber, and 3 years old preferred needlepoints canvas. Adults preferences for texture were inversely related to children's preferences.

Ravera (1987) studied on training blind children to employ appropriate gaze direction and sitting behaviour during conversation. The sample consisted of 5 congenitally blind children aged 5 - 8 years and they were trained to simultaneously employ appropriate gaze direction and sitting behaviour while talking with an adult. A multiple base line design showed that all subjects reached the criterion level of 100% for 3 days in 19 - 25 training sessions. Although 3 subjects were in the same classroom, targeted behaviours were not manifested until formal training was brought into light.

Singh (1987) carried out an investigation on role of visual experience in short term recall of movements of congenitally blind subjects. The 94 congenitally blind subjects were compared with 94 sighted subjects who were blind folded on short-term recall throughout the 2 experiments. Results showed that blind subjects failed in pre-selected conditions, while the sighted used the pre-selected conditions very effectively. It was also observed that blind subjects showed poorer recall in locating a target or reproducing the same movement extent than their sighted counterparts. When the movements of the subjects were pushed forward or backward to cause response biasing, the sighted subjects reduced the effects of response biasing on pre-selection of target while the blind subjects did not attentiate the effects of response biasing.

Ittyerah and Mitra (1988) carried out an investigation on synthetic perception in the sensority deprived. The sample

consisted of 60 Indian subjects comprised of 20 congenitally blind, 20 congenitally deaf, and 20 normal and they rated metaphors from english poetry containing either visual or auditory imagery on a 9 - point visual and auditory scale ranged from very dark to very bright and very soft to very loud. Blind subjected were presented recorded cassettes and deaf were presented material through both modes. The results pointed out that the sensorily deprived subjects did not differ from each other or from controls in the rating of metaphors on visual or auditory imagery content. It was clearly concluded that there was synthetic perception among the sensorily deprived subjects.

Arnold (1988) carried out an investigation on reproduction of movement extent cues in sighted and blind adolescents. Under three retention conditions the kinesthetic abilities of blind and sighted adolescents in reproducing the arm movement were tested. Twenty congenitally blind, 10 adventitiously blind and 20 sighted subjects were evaluated on the ability to reproduce a movement extent on a linear positioning device for 75 trials and 0-, 7-, and 15-s retention conditions. Analysis of variance with repeated measure was calculated. It was concluded that congenitally blind, adventitiously blind and sighted subjects performed equally good in reproducing kinesthetically based movements.

Davidson (1988) carried out a study on the feasibility of identifying and using child specific behaviours other than

those commonly recognized as communication behaviours. The subjects were 4 visually impaired severely / profoundly handicapped boys ages 4 to 7 years, who were students in a private day school. A single subject alternating treatment research design that include a 10 minute baseline condition and two 10 - minute treatment conditions was used. In baseline condition, stimuli were presented at 10 second intervals. In treatment condition B, the same stimuli were presented at 10 - second intervals, and stimuli were presented additionally in response to smiles, gestures, or vocalization. If the child made no response within 10-seconds, the next prescribed stimulus was presented. The third treatment, condition C, was identical to the second except that additional stimuli were presented in response to behaviours that were specific to the subjects, such as Jaw movements or Cassation of random eye movement, in addition to the pre-determined behaviours of smiles, gestures, or vocalizations. All the session were videotaped for scoring the number of smiles, gestures and vocalizations that occured within 10- minute condition.

The graphs for all 4 children showed an increase in variability between baseline and experimental conditions. There did not appear to be a significant difference in the effectiveness of the two experimental conditions on the dependent variables.

Gloria (1988) carried out a study on six totally blind and severely mentally retarded children. The findings and the anecdotal data obtained suggest that the decision to use either strategy should be based on knowledge of individual student characteristics. The students ability to search for appropriate placement of the training items appeared to be influenced by their experience and practice in the haptic exploration of the environment.

Heller (1989) investigated on texture perception in sighted and blind observers and evaluated the visual imagery of 30 subjects composed of 10 early blind aged 24 - 50 years, 10 late blind aged 32 - 53 years and 10 sighted controls aged 20 - 55 years for texture perception. There was no difference in the relative smoothness judgement of abrasive surfaces by using active or passive touch between sighted and blind subjects. It was also found that vision and touch showed no difference on performance with relative course textures, but touch was superior to vision for much finer surface texture when 24 sighted subjects compared a broad range of textures using a similar procedure. It was concluded that for texture perception vision coding of tactual stimuli is not necessary or advantageous.

Heller and Kennedy (1990) conducted a study on perspective taking, pictures and the blind. The 27 congenitally blind, late blind and blind folded sighted subjects participated in two experiments conducted on Piagetian perspective taking task. Subjects used embossed line drawings to depict alternative

points of view of an array of 3 geometric solid forms. No difference was found between the three groups, i.e. blind, late blind and blind folded sighted in the accuracy or speed of tactile shape matching. It is concluded that visual imagery and visual experiences may not be necessary for tactile perspective taking.

Jan, Sykanda and Groenveld (1990) studied on habilitation and rehabilitation of visually impaired and blind children. The purpose of study was to describe neurological developmental and cognitive differences that exist between visually impaired (6), blind and sighted children. The areas of discussion on neurophysiological principles of intervention were associated with handicaps in 6 children, motor development in 6 infants and young children. Visual impairment affects the total process of gathering and exchanging information and also affects noticeably the motor skills, language development cognition and social skills. For specific intervention the needs of blind children and the effects of visual impairment on social and emotional development were stressed and identified.

Jan, Groenveld and Sykanda (1990) carried out a study on light-gazing by visually impaired children.They assessed the prevalence and characteristics of light-gazing by visually impaired children referred to a V.S.I. programme over two and a half years. 167 children with ocular visual loss and 69 children with cortical visual loss took part in the study. One of the

clinical sign of cortical visual loss, light gazing occurred in 60% of children with cortical visual loss. The results suggested that the blind mannerism had specific neuropathological substrata.

Pring, Freestone and Katan (1990) studied on recalling pictures and words : Reversing the generation effect. The 22 blind and 21 sighted subjects were experimentally tested on memory of words and embossed pictures. Performance was studied under neural conditions (naming words and pictures) and when they were self generated in response to cues. Blind subjects identified pictures with the same case as blind-folded sighted subjects. The memory performance was similar in both the groups, i.e. blind and sighted.

Tait (1990) carried out an investigation on the attainment of conservation by Chinese and Indian children. 30 blind Chinese, 34 blind Indian children and 40 sighted Chinese children took part in the study. Both groups of blind subjects performed poorer than sighted on achievement of conservation. It is concluded from the results that visual impairment obstruct the achievement of conservation.

Bigelow (1991) conducted a study on hiding abilities in blind and sighted children. The children with varying visual abilities participated in the study of the development of the ability to detect what is seen by another. The blind children

were not as successful as the other children at hiding activity. The blind children associated hiding with being in contact with an obstacle but did not necessarily understand that the covering obstacle had to completely block the observer's view of what hidden or that covering was not necessary if other obstacles already blocked the observer's view. The blind and one visually impaired children associated self exposure with exposure of mouth, whereas the other children who associated self-expose with a particular body part associated self-exposure with exposure of their eyes.

Studies on Non-Cognitive Factors :-

Hamed (1965) conducted a study on fifty blind and fifty sighted children on personality measure. The purpose of the study was to identify the differences between comparison-groups on personality measure. The Williams' intelligence test for children with defective vision and version's abstraction test of intelligence were used for assessing I.Qs. The writer prepared and used the blind children's structured interview, a sentence completion test and a semantic differential for the assessment of the personality. The junior Mandslay Personality Inventory was also used. It was indicated from the results that the process of adjustment in the blind persons was not significantly different from that of sighted people.

Kaur, Singh and Jain (1978) carried out a study on 'Social and emotional Adjustment of Normal and Blind Adolescents. A random sample of 80 normal adolescents was compared with 40

blind adolescents, age 11 - 13 years and 14 to 16 years respectively. Junior personality Inventory in Hindi formulated by Mohan et al (1968) was administered. The result revealed that there were no significant differences between social adjustment of normal and blind adolescents. There were significant differences between emotional adjustment of normal and blind adolescents. It was also found out that there were no significant differences between social and emotional adjustment of younger and older blind adolescents. No significant difference was found between blind male and female adolscents in the areas of social and emotional adjustment.

Schulz, (1979) carried out a study on 100 blind veteran (78 of whom were aged 50 years or older) for their rehabilitation. The researcher measured their levels of functioning regarding self-care, home-care, travel, recreation, writing, and reading. He indicated how much time their performance took in these activities so that the assessment was based on subjects' subjective perceptions of their own needs. Findings showed that further training in many of the activities was unnecessary, but where needs existed, they were concentrated primarily in reading areas and to a lesser extent, in recreation and home care. It was concluded that rehabilitated veterans believed they had continuing unmet needs despite the fact that sources at the time were allocated to redress those needs.

Nisar and Khan (1982) carried out an investigation on the personality characteristics of visually disabled boys through the level of aspiration test. 42 blind school going aged 11 - 16 year old boys were administered Ansari's test of level of aspiration. The results revealed that the aspiration level of visually handicapped was low. They were causious, insecure and failure avoiding.

Qadari, and Husain (1982) carried out a study on certain social psychological dimensions among handicapped and non handicapped students. The study consisted of 20 blind students as an experimental group and 20 normals as a control group studying in standards VIII to IX at Aligarh. Interview technique for data collection was followed. Analysis was done with the help of chi-square and percentages. It was found out that the blinds were from psychological broken homes and suffered from emotional maladjustment.

Rodrigues, (1982) studied on the nature of self-injurious behaviour among visually impaired residents of mental retardation facilities. This study was an exploratory investigation into the characteristics of self-injurious behaviour in groups of mentally retarded persons with varying degree of sensory impairments - normal vision, partial vision, legal blindness with guiding vision, no vision and multi-sensory handicap (or deaf-blindness) Questionnaires and interview schedules were completed for 171 institutionalized subjects.

Data were collected relating to social History, physical status, social relatedness, level of functioning, and stereotypic activities in addition to various aspects of self-injurious behaviour.

The five groups did not differ in physical status, consistant relationships were found between the degree of sensory impairment and lack of family contact, social relatedness, level of functioning and non-injurious stereotype. There was also a relationship between sensory impairment and the frequency and severity of self injurious behaviour.

Iverson (1984) conducted a study on stereotypic behaviour in blind children and in relationship with antism. For this purpose twenty six blind children were selected from two residential schools for the blind. These children were classified into groups. These groups were (1) those with rubella (2) those with retrolental fibroplasia, and (3) those blinded by other causes. Each child's cumulative file was reviewed for background information. Systematic observations were conducted on each child for presence of autistic-motility behaviour. Observation was for a five minutes period in four environments, i.e., classroom, structured instruction, meal-time activity / breakfast, lunch, and supper, physical education / movement activity and unstructured leisure time.

It was concluded that the presence of stereotypic behaviours in all blind children was a fallacy. Where the

impairment is in the visual tract of the central nervous system (CNS) stereotypic behaviour in blind children are performed. These included autistic motility behaviour and the visual behaviour of eye pressing / pocking and flicking.These are greater in rubella children as a result of their multiplicity of handicapping conditions. When scizures, diabetes, and other diagnosed neurological diseases or neurologically related disorders are part of a multiple handicap, a wider variety of stereotypic behaviour are performed. The lack of vision had no effect on the manifestation of stereotypic behaviour.

Singh and Pathak (1984) studied on four personality dimensions,i.e.,psycholicism, extraversion, neuroticism and Lie of 30 totally blind (15 congenitally and 15 adventitiously) and 30 sighted subjects aged 18 - 31 years. Subjects were matched on age, income and education. Eye-senicks' Personality questionnaire (Hindi version) was administered. The results of the study indicated that both the groups (visually impaired and sighted were similar on any of the four scales. However, there was a marginal difference between the two groups on Lie scale.

Nelms, (1984) carried out a study on personal and program variables related to the successful rehabilitation of persons who are diabetic and blind. The purpose of study was to determine the relationship between nine personal (i.e. (1) age of referral (2)age at onset of blindness, (3)gender, (4)material status, (5)race, (6)number of dependents,(7)level

of education, (8)work status at referral, and (9)receipt of transfer payments) and four programme variables, i.e. (1)total amount of money spent for rehabilitation services, (2)number changes in occupational goal, (3)proximity to the adjustment facility, and (4) training in orientation and mobility) and rehabilitation outcome. The 124 subjects were selected out of 619 legally blind and blind closed cases from project R-4. The findings were that the diabetic and blind persons rehabilitated successfully - (a)both were older at referral, (b)received less public assistance, (c)had more changes in occupational goals, and (d)were more often female than the successfully rehabilitated subjects.

Agarwal and Kaur (1985) carried out an investigation on anxiety and adjustment level among visually and hearing impaired and their relationship to locus of control cognitive, social and biographical variables. The sample consisted of 45 hearing impaired and 40 visually impaired residential school children aged 6 - 16 years. Subjects were administered measures of adjustment, anxiety and locus of control, intelligence scores and their academic level, teacher and peer acceptance and biographical variables were also obtained. It was colcluded that the correlates of anxiety and adjustment differed qualitatively as well as quantitatively between the groups.

Bishop (1985) studied on 304 persons including teachers of visually impaired students, classroom teachers, school

principals, parents and visually handicapped students. The opinions were collected and evaluated through rank ordering procedure. The result revealed that seventy factors were associated with successful main streaming for visually handicapped pupils. The desirable characteristics of visually handicapped pupils included inner drive, emotional stability, independence, social skills, adequate basic and special skills and academic achievement.

Holburn & Dougher (1985) discussed the use of a generalization training technique that was employed to teach a 26 years old blind male with Down's syndrome to exit his living unit during a fire drill without panicking, using a combination of negative and positive reinforcement. Following a shaping procedure in which the opening of an exit door resulted in living unit from any internal point through generalization training and subsequent test probes. Training was conducted in an informal game like manner to decrease the subjects anxiety.

Luiselli (1985) conducted a study on behavioural training and acquisition of skills for the blind, severely ratarded adults. The three blind severely retarded women aged 21, 22 and 24 years were evaluated for the effectiveness of a behavioural training programme for improving the prevocational work performance in two studies in which the three subjects were trained separately. Tasks included screwing nuts and bolts together and inserting cards into envelops. The results showed that a programme that combined responses - contingent prompting

and reinforcement procedures was successful in increasing the quantity of tasks that each subject completed. The data from study 2 also demonstrated that the attentional behaviour was enhanced following training and performance could be improved and substained with low level of prompts from the trainer.

Harrell and Strauss, (1986) conducted a study on approaches to increasing assertive behaviour and communication skills in blind and visually impaired persons and found out that many visually impaired individuals were found to be too passive or too aggressive in their social interactions. Lack of assertive behaviour developed a sort of helplessness. With a structured intervention resulting in improved assertiveness skills, blind or partially sighted individuals could increase their effectiveness in communicating with others and they could also control their emotions.

Hensley,(1986) conducted a study on the application of contrast sensitivity data for adjustment of closed circuit television system used by the visually impaired subjects. Seven legally blind children age ranged 13 to 17 years took part in the multiple single case study with the enhancement of visual stimulation during use of closed circuit television. This research involved assessment of the child's functional vision by contrast sensitivity and identified a series of steps which used that data for adaptation of the closed circuit television for the individual visual requirements of the child. The child

adjustment relative to changes in rates of correct and incorrect responses to letters viewed on the video monitor and researcher contrast sensitivity adjusted settings were compared. A statistically significant increase in correct responses was associated with the experimentally adjusted closed circuit television. No increase in incorrect responses was observed. This findings suggest that application of this procedure may improve the reading efficiency of visually impaired persons during the use of closed circuit television.

Nemshich, Mc Cay and Ludman (1986) investigated the impact of retinitis pigmentose (RP) on the ;sychological, educational,vocational and social considerations of young adults. A survey of 307 subjects aged 13 - 17 years old with retinitis pigmentosa revealed that many subjects felt that this defect of vision adversely affected their educational employment, mobility and socialization. Subjects also indicated that special counselling was needed to accept and adjust to their condition and that sharing would be beneficial with peers.

Passini, Dupre and Langlois (1986) conducted a study on spatial mobility of the visually handicapped active persons. The forty-seven subjects who were congenitally blind, adventitiously blind or visually impaired with strong or weak visual residues were interviewed which covered the subjects mobility profile, value of mobility courses, way finding strategies, information used during way finding, physical obstacles and

dangers during way finding, use of residual vision and other senses and the cognitive mapping and spatial representation of the environment.

Palazesi (1986) conducted a study on four visually impaired children to establish a relationship between a treatment programme that draws on the intervention curriculum model and static and dynamic behaviours. The result showed that no clear and definite change was evident in the subjects behaviour.

Taylor (1986) studied on Home-sickness, melancholy and blind rehabilitation and suggested that home-sickness is a form of depression often precipitated by the combined stresses of sight loss, aging and separation from family. It was found that the home-sickness caused by loss of sight of veterans inspeded the rehabilitation programme of adjustment and management in a residential setting.

Sarita & Sharma (1987) carried out a study on adjustment pattern of visually handicapped and sighted students. The sample population consisted of 40 visually handicapped and 40 sighted students (Boys and Girls) of age group 14 - 18 years. Adjustment inventory for school students by A.K.P Sinha and R.P. Singh was administered. The result revealed that visually handicapped students were poorly adjusted in emotional, social and educational ground. The same condition prevailed on the measure of total adjustment.

Gupta (1988) investigated into the personality of the blind. The purpose of study was to know the perceptual / motor skills and personality variables likely to influence social adjustment and vocation training of 50 blind subjects aged 16 - 25 year. The results showed no significant difference on perceptual and motor performance of high and low scoring subjects on the sixteen personality factor questionnaire (16 P.F.) and an excitability rating scale.

Miller (1988) carried out a study on placement of visually impaired persons. The forty-eight states and fifty-five private agencies in the U.S. offering vocational rehabilitation services for blind and visually handicapped clients were surveyed and data revealed that agencies employing both rehabilitation counselors and placement specialists were experiencing a higher rate of success than those agencies not employing placement specialists.

Wilhelm, J.G. (1989) investigated on fear and anxiety in low vision and totally blind children. The sample consisted of 139 visually impaired children aged 6 - 16 years who were administered a fear survey and a manifest anxiety scale. Subjects were classified into totally blind and low vision groups. The scores of totally blind subjects on fear and anxiety were similar to those of low vision subjects. The totally blind and low vision sample and general population were compared favourably

on the level of anxiety. It was found that the subjects had the tendency of fear for bodily injury.

Saez (1989) investigated on integration of blind and visually impaired children. The author argued that integration of blind and visually impaired subjects into society is a way of achieving the far reaching goal of mainstreaming, whereby the differences inherent to each individual are considered by society as something normal. The differences should be taken for granted as part of the human variety underlying the various communities and groupings that compose society. The role of the family, educational agencies and society in attaining this goal were depicted.

Hill, Brantner and Spreat (1989) conducted a study on the effect of contingent music on the sitting behaviour of a blind young women with profound mental retardation. The subject was a 17 year old women, profoundly retarded, who exhibited non-compliant behaviour and refused to sit in the classroom. The purpose of study was to investigate the effectiveness of the music as a reinforcer for non-compliant behaviour. Reinforcements were delivered in 12 sessions and 16 sessions in two phases, namely, A.B.A. phases and 2 simultaneous treatment phases. There was significant increase in target behaviour. In addition, the subject discriminated among different types of music and the behaviour rates varied suitably.

Mishra, (1990) also carried out a study on "Self - concept of physically handicapped and normal children". The study was done on 25 blind subjects, 15 hearing impaired subjects, 15 orthopaedically handicapped and 45 normal subjects. The 80 item Oriya version of "The way I feel about myself developed by Pieris and Haris (1961) was used to measure the self concept of the physically handicapped and the normal. The results revealed that blind, orthopaedically handicapped and hearing impaired subjects were poor in self concept in comparison to the normal children.

Abdi & Zaidi (1990) conducted a study on general anxiety and test anxiety of visually handicapped children in relation to grades. Forty five randomly selected visually handicapped subjects took part in the study. General anxiety scale (Kumar 1982) and an Indian adaptation of Sarason's test anxiety scale for children developed by Kumar (1985) were used. The results revealed that the visually handicapped children have more general anxiety than the test anxiety which indicated that their general adaptedness was poor and they possessed an inextricable feeling of insecurity. On the other hand lower scores in test anxiety indicated no specific fear or threat in test situation.

Sherrill, Hinson, Gench and Kennedy (1990) examined the self-concept of 158 disabled athletes aged 9 - 18 years. The subjects were English speaking and had either cerebral palsy,

blindness, dwarfism, spinal cord injury, amputation or les autres. Subjects completed the self-perception profile for adolescents, measuring global self-worth, scholastic, athletic and job competence, social acceptance, physical appearance, romantic appeal, behavioural conduct and close friends. It was concluded that disabled blind following the same general pattern of able bodied youth subjects.

Nisar (1990) carried out a study on the psychological problems and extraversion of congenitally and adventitiously blind subjects in relation to their academic attainment. 23 congenitally blind and adventitiously blind subjects of both the sexes studying in VI to X standards were administered Eysenck's Personality questionnaire (E.P.Q.) through interview technique. Pearson's Product Movement Coefficient of correlation was calculated to find out the relationship between psychological problems and extroversion and school attainment of both the groups. It was found that (i) adventitiously visually impaired subjects were associated with more psychological problems like fear, anxiety, conflicts, tension, frustration etc. than their counterparts (ii) congenitally blind were found to be more extrovert, happy and satisfied than their conterparts. (iii) congenitally blind were found to be superior in academic performance than the adventitiously blind conterparts.

Mittal (1991) conducted a study on personality trails of educated blind and sighted youth. The Hindi adaptation of

Cattell's 16 P.F. test was administered on 100 sighted educated youths and an adapted Hindi version of 16 P.F. test for the blind youth in braille form was also administered on 100 educated visually impaired youths. The investigator also developed and used the family environment interview schedule to study the family environment of the blind and sighted youths. The results showed that :

(i) There was not much significant difference between visually impaired and sighted educated youth on the measure of personality.

(ii) There was significant difference in some personality traits of the blind and sighted youth, the blind subjects possessed higher level of anxiety than the sighted subjects.

(iii) The perception of family environment by the blind was found to be highly negative and highly positive among the sighted subjects.

(iv) Age education and perceived family environment were found to have influenced the personality development of the blind as well as the sighted.

Bigelow (1992) carried out a study on locomotion and reach in blind infants. A longitudinal study on the relationship between locomotion and object-reach was carried out on blind infants by examining the timings between the emergence of crawling and walking and the infants' performance on

reaching tasks indicative of advancement in object permanence. The children's locomotor skills were related to their development of object permanence despite developmental delays in both the abilities.

Troster and Brambring (1992) conducted a valuable study on early social emotional development in blind infants. The purpose of study was to find out the impact of blindness on social and emotional development during first one year of life and the level of social and emotional development was compared in blind and sighted infants. Blind infants exhibited a more limited repertoise of facial expressions and less responsiveness. They less frequently attempted to initiate contact with their mothers or comply with simple request and prohibitions than sighted infants.

Studies on Remedial and Rehabilitation :-

Perlman and Gillman (1979) conducted a study on Mainstreaming visually handicapped preschoolers. Four visually handicapped children were mainstreamed by the child development centre of the New York Association for the Blind. The children attended a developmental preschool programme for the visually handicapped in the morning and were bused in the afternoons to a private non-sectarian pre-school programme.

Observations of a mainstreaming programme led to the conclusion that extensive preparation is vital to success. Pupils and teachers although well intentioned, become anxious, resort to stereotypic behaviours, and demonstrate avoidance of handicapped students. These behaviours seems to be infrequent in the begining overtime.

Drigger (1982) studied on a relationship between the behaviour of elementary school level blind and low vision children and social acceptance by sighted peers in regular classroom. It was concluded that blind and low vision children were less accepted by sighted peers, they were either ignored or isolated in the classroom.

Dietz (1984) conducted a study on work status outcome for blind and legally blind vocational rehabilitation clients as a function of gender and residency. The purpose of study was to identify whether selected personal, financial process, occupational and geographic variables could discriminate among work status, wages, group membership for rural male, rural female and urban male and urban female. Population of blind and legally blind vocational rehabilitation clients. The sample consisted of 619 blind and legally blind vocational rehabilitation clients. The population was classified in four groups on the basis of work status, i.e. wage earner I, competitive employment, self - employment, or business enterprise. Wage Earner II, sheltered workshop or home bound industries, non-wage earner I, home-

maker or unpaid family worker, and non-wage earner II, student, trainee, unemployed or other. The rural female cases were most accurately predicted into their actual group, followed by rural males, urban females, and urban males respectively.

Pandey (1985) studied on affectional deprivation, ego strength and adjustment pattern among visually handicapped children and their rehabilitation. 40 visually impaired students, consisting of 32 males and 8 females were randomly selected. Out of 32 males, 16 belongs to congenitally blind (8 urban and 8 rural) and 16 were post natal blind (8 urban and 8 rural) Out of 8 female students 4 were (two urban and two rural) congenitally blind and the remaining four were post natal blind (two urban and two rural). The tools used were (i) Ego strength scale by S.Q. Hasan (ii) Prolonged Deprivation Scale PDS, Mishra and Tripathi, (iii) Adjustment Inventory - the adapted version of Eysenk's and (iv) Mandsley Personality Inventory MPI, Jalota and Kapoor,1965). The results were, 1.The deprivation among rural blind children was found significantly more acute than the urban blind children, 2.On affectional deprivation both the groups, congenitally blind and post natal blind were similar, 3.There was no significant difference in the level of ego-strength between urban and rural visually handicapped children, 4.There is no significant difference in ego-strength between congenitally and post-natally blind children, 5.There is no significant difference in adjustment patterns between urban and rural visually handicapped children, 6.There was no significant difference in

the pattern of adjustment between congenitally and post-natally blind children, 7.There was no significant difference in the ego-strength, affectional deprivation and adjustment pattern between the male and female visually handicapped children, 8.It was found that 10 blind children had poor ego-strength and poor adjustment. They were emotionally immature and the need was felt for their rehabilitation.

Khan (1985) aim at comparing the educational aspiration and occupational expectations of blind and normal children. The results revealed that blind children possessed lower educational aspirations than the sighted which may be due to the blindness and non-availability of facilities for blind children. For blinds the occupational expectation were highly related with the type of training, they have got in the school.

Freedman (1985) studied on visual prostheses and aids: Psychosocial issues of readiness or appropriateness. The author discussed the sensitivity needed by professional in suggesting and providing visually impaired individuals with vision prostheses and aids. Many visually impaired individuals have fear and ambivalence in the use of such devices and often reject their use.

Ridgeway (1985) carried out a study on mainstreaming of visually handicapped students. The administrations, regular class room teachers, teachers of visually impaired and parents

of visually impaired children were administered a questionnaire and also interviewed for knowing whether their visually impaired children were benefitting from being mainstreamed. In this study 86 visually impaired subjects participated. There was an over all aggrement between four groups about success and good quality of teaching. The teachers of visually impaired students were the most negative among all respondents. It was concluded that for real success of main streaming for visually impaired children a next coordinated effort is needed.

Sisson and Dixon (1986) investigated on improving meal time behaviours of a multi handicapped child using behaviour therapy techniques. Audiotapes of favourite stories were played during the meal time session of a 10 year old girls who was blind mentally retarded and behaviourally disordered and were turned off during inappropriate or self-injurious behaviour. Praise for appropriate napkin and utensils was provided once desired sitting posture had been established. Trainer behaviour brought the good compliance with treatment procedure, suggestion that the treatment programme may be effective in other settings also.

Covelli, (1987) conducted a study on utilization of recreation and sports related programmes by the blind and visually impaired university population at an Illinois University. The blind and visually impaired population of Southern Illinois University - Carbondale was surveyed and research questions were

built to collect information in ten areas of inquiry. The data were divided into three categories two categories incorporated quantitative information and one non-quantitative. It was concluded that currently enrolled visually impaired and blind students benefitted more with the "Recreation and Sports Programme" than those who were enrolled much before and among them the females were more benefitted than the male counterparts.

Lundervold, Lewin and Irvin (1987) investigated on rehabilitation of visual impairments. In this study four non-surgical methods of treating visual impairments were evaluated, (1) Optical aids (2) Contrast effects (3) Vision stimulation, and (4) Vision training. It was concluded that the most successful and extensively researched approach to rehabilitation of vision is vision training through operant conditioning method.

Singh (1989) studied on education of blind and visually impaired children in India. The historical perspective of the progress of educational and rehabilitation services for visually impaired and blind subjects in India were looked at 2 major phases - services before independence, (1987 - 1947) and after independence, (1948 onward). The pre-independence period was marked by the tradition of special schools for the visually handicapped and people sponsored by European missionaries. In the post independence era, efforts shifted from mere institutional care in special

schools to the over-all development of visually handicapped children. In this period, the Indian government, State governments and voluntary organizations also became active. Researches relating to the psychological adjustment, education, training and rehabilitation of visually handicapped children were also brought into light.

Read (1989) investigated on an examination of social skills of blind kindergarten children. The goal of the investigation was to provide blind subjects with the tools to enhance their functioning in the regular class-room without imposing the values associated with sighted subjected on the blind subjects and measured the following skills; (1) participation in actions with others, (2) maintenance of relationships, (3) development of assertiveness, classroom and cafeteria skills from 3 blind kindergarten blind children. Findings were discussed in terms of broad methods of social skills training and in terms of the specific skills deficits experienced by each subject.

Lambert (1990) investigated on the use of dog guide. The purpose of study was to examine the psychological problems and joys for blind people of obtaining and using a dog guide for independent mobility. The issues like the role that anxiety, embarrassment, and the dependence - independence conflict play in dog guide use were discussed. The anxiety or resentment that may be produced by the pass or fail atmosphere of the dog guide training centre and stress factors related to dog guide bond were also brought into light.

CHAPTER III

METHOD AND PROCEDURE

As mentioned in the previous Chapter, the present study aims at comparing between visually impaired students studying in special schools for the blind and integrated schools on cognitive and non-cognitive personality dimensions. The present Chapter deals with the methodological and procedural aspects of the research study, the tools and statistical treatment of the data of the present work.

The procedural aspect of the study has been set under the following sub-heads.

1. Population.
2. Tools of the study.
3. Administration of tests and collection of data.
4. Scoring and tabulation.
5. Statistical treatment.

1. Group Test of General Mental Ability (Hindi)
   Revised edition by Dr. S. Jalota.

2. Verbal Test of Creative Thinking
   Revised edition by Prof. Baqer Mehdi.

3. Indian Adaptation of Cattell and Beloff's H.S.P.Q.
   (Kapoor and Mehrotra, Form A)

Measure of Intelligence :-

Group Test of General Mental Ability (Hindi) by Dr. S. Jalota is a 100 item test, which measures the verbal, numerical and reasoning ability of the individual. As the author claimed, the test is highly suitable for the varied research situations. The time allotted for this test was 20 minutes. A brief instruction was given by the researcher to the subjects before starting the test just to make them aware how to go through the test.

Reliability of the Intelligence test :-

The reliability of the general mental ability test, as claimed by the author has been calculated by finding out correlation between odd and even halves scored by the tested population, the Spearman Brown formula was used for the

Population :-

The population consisted of 134 visually impaired students . Out of the total sample, 99 were studying in special schools for the blind and 35 were studying in integrated settings. The special schools selected for the purpose were Ahmadi School for the blind, Aligarh; Andh Vidyalaya Panch-Kuiyan Road, New Delhi; Andh Maha Vidyalaya Panch Kuiyan Road New Delhi; J.P.M. Senior Secondary School for the blind, B.R.A. New Delhi; Rashtriya Virjanand Kanya Maha Vidyalaya, J. Block Vikaspuri, New Delhi; and Asthavak Training Centre, Mangoli, Shahbad, Distt. Rampur. The integrated schools were Government Model S.S. School, President's estate, New Delhi; Senior Secondary School, Rani Jhansi Road, New Delhi; Commercial Higher Secondary School, Darya Ganj, New Delhi; D.A.V. Inter-College, Panch Kunya Road, New Delhi and Senior Secondary School (Girls), A.M.U. Aligarh.

The group of special students consisted of 57 boys and 42 girls and the group of integrated students was constituted of 30 boys and 5 girls.

Tools :-

As for the tools of the study, only the standardized tests were employed for obtaining more reliable and valid results. The tools were as follows :

correction of correlation coefficient. The reliability coefficients were uniformaly high for all the classes targetted in the study, so the author recommends the final version of the revised test (72) as quite reliable for Class VIII, IX, X, as can be seen from the following table.

Class	VIII	IX	IXa	IXb	X
N	335	379	201	178	363
	0.783	0.873	0.906	0.845	0.908
	0.879	0.932	0.953	0.916	0.979

(Rev. Manual; 72, p. 20)

Validity of the Intelligence test :-

As claimed by the author, the validity of General Mental Ability Test has been reported on the basis of factor analysis of the inter-element scores which gave a pattern of a three centroid factors. When obliquely rotated to simple structure, these exhibited an identification of the verbal, numerical and reasoning factors (New Trends in Education, Chandigarh, 1973, April, p.4-6). The author tried to determine the contribution of the V.N. and R sub-tests to the total scores of the final revised version. The author has reported

the results of multi correlation (R) study with one group consisting of 178 students of class X. The author also obtained the results of 363 students and 379 students of Class X and Class IX respectively. The inter-correlations between the V.N.R. and total scores for a group of 363 students are presented as under.

	1.T	2.V.	3.N	4.R.
V	.683	-	.582	.620
N	.599	-	-	.491
R	.874	-	-	-

(T = Total, V = Verbal, N = Numeral, R = Reasoning)

R^2 1.234 = .1045 + .1003 + .6087 = .8135

Coefficient of Multiple non determination = .1865

contribution of V=10.45%; N=10.03%; R=60.87% .

The inter correlation between the V, N, R and the total scores for a group of 370 students of class IX are given as under.

	1.T	2.V	3.N	4.R
V	.9033	-	.5841	.6386
N	.8004	-	-	.5913
R	.8565	-	-	-

R^2 1.034 = .3284 + .2337 + .4264 = .9885

Coefficient of Multiple non-determination = .0115

Contribution of V=32.84%; N=23.37%; R=42.64% .

The contribution of non-determination is quite low in both the cases. As the author of the test claimed the contribution of the specific verbal Numerical, and Reasoning components, indicates a fair distribution in the data of standardisation sample. So the author confidently recommends the revised test (72) as tool for the assessment of General Mental Ability and for the prognosis of Verbal Numerical and Reasoning abilities of the subjects.

The Verbal Test of Creative Thinking :-

According to the manual of verbal test of creative thinking; the test includes four subtests, namely consequences test, unusual uses test, similarity test and product improvement test. The number of relevant responses on these subtests measures one's ideational fluency, the number of thought categories measures flexibility and the number of un-common or novel responses measures originality of the subject.

Consequences test :-

The basis of the consequences test is Guilford's consequences Test or Torrance's just suppose activity. The activity includes the tasks which are very familiar but confront the subject with a situation which he can think of with a large number of possibilities to a hypothetical happening. It consists of three tasks or hypothetical situations.

(a) *What would happen if man could fly like birds ?*

(b) What would happen if our school had wheels ?

(c) What would happen if man does not have any need for food ?

The time allowed for each problem was 5 minutes.

2. Unusual uses Test :-

The idea of unusual uses test is based on Guilford's Brick uses test or Torrance's tin-can uses test or cardboard boxes uses test. In this test the subjects were asked to write as many novel, interesting and unusual uses of three objects, namely a piece of stone, a wooden stick and water.

The time allowed for the three tasks was four minutes each.

3. New Relationship :-

The idea of new relationship come from Mendrick's association. In this sub-test the subjects were asked to think and write as many novel relationships as possible between two objects of each pair in the space provided. The pair of words are, tree and house, chair and ladder, air and water.

The time allowed for each pair was 5 minutes each.

(d) Product Improvement :-

In this test the verbal imagination is similar to the Torrance's product improvement activity. Torrance used a picture of a monkey but in this sub-test the subjects were asked to think of a simple wooden toy of horse and suggest changes to make it more interesting and unusual for the child to play.

For this sub-test the time allowed was 6 minutes.

The total time required for the administration of the test was forty-eight minutes in addition to the time necessary for instructions, passing out test booklets to the subjects and collecting them back.

Reliability of the Test :-

As the author claimed the test-retest reliabilities of the factor scores and also the total scores were obtained on "small sample" (N = 31). The reliability for fluency, flexibility originality and total creativity scores were 0.945, 0.921, 0.896 and 0.959 respectively. The value of reliabilities were highly satisfactory.

Validity of the Test :-

As claimed by the author the validity for factor scores and the total creativity were high enough to provide confidence for using the test. Higher correlations with teachers ratings

were usually not found due to the unreliability of the ratings. The validity coefficient against the teacher ratings for each, fluency flexibility, originality and total creativity scores were 0.40, 0.32, 0.34 and 0.39 respectively. All values were significant beyond .01 level.

Measure of Personality :-

For knowing the personality characteristics of visually impaired children studying in special and integrated settings in the present research work, the researcher used an Indian adaptation of Cattell and Beloff's H.S.P.Q. (Kapoor and Mehrotra, form A, 1973), which covers the fourteen dimensions of personality. The test consists of very comprehensive 114 items. As claimed by the author, the test measures "distinct dimensions or traits of personality" (Cattell and Beloff, Manual for H.S.P.Q., 1973) and the authors also claimed that the test covers both the aspects of personality, i.e., structural and dynamic.

The researcher thoroughly scrutinised the H.S.P.Q. for his own research work and found it very much suited for the study as regards to age group of the subjects, and secondly being in an Indian language, namely Hindi, was easy to administer.

The H.S.P.Q. consists of fourteen personality factors, identified with alphabets A,B,C,D,E,F,G,H,I,J,O,Q_2,Q_3, and Q_4 . Each factor or trait is bipolar, the low score representing

the left pole while the high score respresenting the right pole. The poles are discribed qualitatively in terms of characteristics opposed to each other. The fourteen factors of personality given in H.S.P.Q. personality questionnaire are given below.

Factor	A boy or girl with low score is :	A boy or girl with high score is :
A	RESERVED Detached,Critical, Alloof,Stiff	WARMHEARTED Outgoing,Easy Going, Participating
B	LESS INTELLIGENT Concrete Thinking, Of Lower Scholastic Mental Capacity	MORE INTELLIGENT Abstract thinking, Bright, Of Higher Scholastic Mental Capacity
C	AFFECTED BY FEELINGS Emotionally Less Stable Easily Upset,Changeable, Of Lower Ego Strenth	EMOTIONALLY STABLE Mature,Faces Reality, Calm, Of Higher Ego Strenth (not the same as "egotistical")
D	UNDEMONSTRATIVE Deliberate,Inactive, Stodgy, Phlegmatic	EXCITABLE Impatient,Demanding, Overactive,Unrestrained
E	OBEDIENT Mild,Easily Led, Accomodating,Submissive	ASSERTIVE Competitive,Aggressive, Stubborn,Dominant
F	SOBER Taciturn,Serious	ENTHUSIASTIC Heedless,Happy-Go-Lucky
G	DISREGADRS Rules,Expedient,Has Weaker Superego,Strenth	CONSCIENTIOUS Persistent,Moralistic, Staid,Has Stronger, Superego Strength

H	SHY Timid, Threat Sensitive	ADVENTUROUS Thick-Skined, Socially Bold
I	TOUGH-MINDED Rejects Illusions	TENDER-MINDED Sensitive, Clinging, Over-Protected
J	ZESTFUL Likes Group Action	CIRCUMSPECT Individualism, Reflective, Internally Restrained
O	SELF-ASSURED Placid, Secure, Complacent, Untroubled	APPREHENSIVE Self Reproaching, Insecure, Worrying, Guilt Prone
Q_2	SOCIABLY GROUP-DEPENDENT A "Joiner" and Sound Follower	SELF-SUFICIENT Prefers Own Decisions, Resourceful
Q_3	UNCONTROLLED Lax, Follows, Own Urges, Careless of Social Rules, Has Low Integration	CONTROLLED Socially-Precise, Self-Disciplined, Compulsive, Has High Self-Concept Control
Q_4	RELAXED Tranquil, Torpid, Unfrustrated, Composed	TENSE Driven, Overwrought Frustrated, Fretful

Reliability of Personality Measure (HSPQ) :-

The group performances on the H.S.P.Q. form 'A' have been compared over time at different intervals for determining the reliability of the test. The authors have

reported the test retest reliability coefficient on the basis of immediate retest ranging from .74 to .91 and after six months ranging from .53 to .69 and after one year .38 to .69 on each of the fourteen factors. The range of coefficients over time clearly indicates that the H.S.P.Q. questionnaire enjoyed a high level of reliability both on dependability and 'stability' (Manual for HSPQ,1973, p.4).

Validity of Personality Measure (HSPQ) :-

The authors have attached much importance to the construct validity of the test. "What matters crucially is good; intensive measurement of the personality factors, in the first place, and therefore the H.S.P.Q. scales are meant to stand or fall by their construct validity" (Manual for HSPQ, 1973, p.5).

As reported by the authors the construct validity coefficients for each of the fourteen personality factors on the basis of multiple correlation "between the items" in the scale and the corresponding five factor are highly significant. The multiple coefficients of 1004 students (Boys and girls) range from .57 to .74 (Manual for HSPQ, 1973, p.5).

Administration of Tests and Collection of Dat :-

The administration of the three tests of intelligence, creativity and personality was completed within two months in

all the 11 schools of Aligarh, Rampur and Delhi, keeping strictly in view of all the instructions given by the authors of the tests.

The investigator prepared and motivated the subjects for the purpose. The visually impaired children were highly involved and interested while they were being tested on Intelligence test, Creativity test and Personality test and they did all the tests very seriously because it was a novel experience for them. The responses were collected in braille and then converted into Hindi language with the help of blind students.

Scoring and Tabulation :-

Scoring on all the three tests, i.e., Intelligence, Creativity and Personality, was done strictly adhering to the guiding lines and instructions provided by the authors in the manuals and keys of the tests.

For the comparative study of visually impaired students studying in special and integrated educational settings on the measure of Intelligence, Creativity and Personality (HSPQ), the five pairs of groups were constituted out of the total population, 134 as given below .

1. Total special students Vs total integrated students.
2. Special school boys Vs integrated school boys.

3. Special school girls Vs integrated school girls.

4. Special school boys Vs special school girls.

5. Integrated school boys Vs Integrated school girls.

Statistical Treatment of the Data :-

For determining the differences between the different pairs of groups on the measure of intelligence, creativity and fourteen factors of personality (HSPQ) means and SD_s were calculated and the mean scores of compared groups were put to 't' test for knowing the significance of difference between the two means. The formula for computing the 't' value is given as under.

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

(Mc Nemar, 1962, p.102)

The analysis of the data is given in Chapter IV .

CHAPTER IV

ANALYSIS OF RESULTS

As discussed in the previous Chapter, the present study aimed at finding out differences on the measure of intelligence, creativity and fourteen dimensions of personality between visually impaired students of special and integrated settings. Since the sample involved cases from both the sexes, the sex differences were also computed on the three measures, intelligence, creativity and personality.

Comparisons on the Measure of Intelligence :-

First of all the comparisons were made on the measure of intelligence between the visually impaired children of special schools for the blind and the visually impaired children from integrated schools. These two groups denoted as total special students and total integrated students. For the statistical treatment of the data means and SD_s were put to 't' test for each pair of the groups. The mean scores of the total special students and total integrated students were found to be 49.87 and 53.2 and SD_s were found to be 16.23 and 16.00 respectively.

When the means and SD_s of the two groups were put to 't' test for knowing the significance of difference between the two means, the 't' value was found to be 1.05 as can be seen from table 1, which is insignificant.

TABLE 1

Showing significance of difference between the mean scores of total special and total integrated visually impaired students on the measure of intelligence.

Subjects	N	Mean	SD	't' value	Level of Significance
Total special students	99	49.87	16.23	1.05	N.S.
Total integrated students	35	53.20	16.00		

The results thus clearly show that both the groups were almost similar on the measure of intelligence.

The mean scores of special school boys and integrated school boys were also measured and compared on intelligence and were found to be 49.49 and 51.20 and SD_s were found to be 17.68 and 15.72 respectively as shown in table 2 .

TABLE 2

Showing significance of difference between the mean scores of visually impaired special school boys and visually impaired integrated school boys on the measure of intelligence.

Subjects	N	Mean	SD	't' Value	Level of Significance
Special School boys	57	49.49	17.68	0.46	N.S.
Integrated School boys	30	51.20	15.72		

The two means were put to 't' test for knowing the significance of difference between two means. The value of 't' was found to be 0.46, which is insignificant.

The results thus clearly indicate that the special school boys and integrated school boys were almost similar on the measure of intelligence.

Comparisons were then made between the special school girls and integrated school girls on the measure of intelligence. The mean scores of the groups were found to be 50.40 and 65.2 and SD_s were 14.01 and 11.92 respectively as presented in table 3.

The means of the two groups were put to 't' test for knowing the significance of difference. The 't' value was found to be 2.57 which is significant at 0.05 level.

TABLE 3

Showing significance of difference between mean scores of visually impaired special school girls and visually impaired integrated school girls on the measure of intelligence.

Subjects	N	Mean	SD	't' Value	Level of Significance
Special school girls	42	50.40	14.01	2.57	.05
Integrated School girls	5	65.2	11.92		

It is therefore inferred from the results that integrated school girls enjoyed an edge on intelligence over the special school girls.

On the measure of intelligence the mean scores of special school boys and special school girls were found to be 49.49 and 50.40 and their SD_s were found to be 17.68 and 14.01 respectively as can be seen in table 4 .

TABLE 4

Showing significance of difference between the mean scores of visually impaired special school boys and visually impaired special school girls on the measure of intelligence.

Subjects	N	Mean	SD	't' Value	Level of Significance
Special school boys	57	49.49	17.68	0.28	N.S.
Special school girls	42	50.40	14.01		

The 't' value was calculated to know the significance of difference between the two means. The 't' value was found to be 0.28 which is again insignificant.

It can be understood from the results that the two groups, i.e., special school boys and special school girls did not exhibit much difference on the measure of intelligence.

As can be seen from table 5, comparisons were made between integrated school boys and integrated school girls on the measure of intelligence. The mean scores were found to be 51.2 and 65.2 and their SD_s were found to be 15.72 and 11.92 respectively.

TABLE 5

Showing significance of difference between mean scores of visually impaired integrated school boys and visually impaired integrated school girls on the measure of intelligence.

Subjects	N	Mean	SD	't' Value	Level of Significance
Integrated School boys	30	51.2	15.72	2.31	.05
Integrated School girls	5	65.2	11.92		

For knowing the significance of difference between means of the two groups, i.e., integrated school boys and integrated school girls, the 't' value was calculated and found to be 2.31 which is significant at .05 level.

It is thus concluded from the findings that integrated girls were superior to the integrated boys on intelligence measure.

The results on the measure of intelligence are summarized as under.

1. The total special students and total integrated students were similar on intelligence.(TABLE 1)

2. Special school boys and integrated school boys were similar on the measure of intelligence. (TABLE 2)

3. Integrated school girls were more intelligent than the special school girls. (TABLE 3)

4. Special school boys and special school girls also did not show any significant difference on the measure of intelligence. (TABLE 4)

5. Integrated school girls were superior to integrated school boys on the measure of intelligence. (TABLE 5)

Comparisons on Creativity :-

Comparisons were made on the measure of Creativity also between the identified pairs of comparative groups. When the total special students and total integrated students were

compared on creativity the mean scores of the two groups were found to be 62.24 and 91.85 and their SD_s were found to be 33.31 and 45.57 respectively as can be seen from table 6 .

TABLE 6

Showing significance of difference between the mean scores of total special students and total integrated visually impaired students on creativity measure.

Subjects	N	Mean	SD	't' Value	Level of Significance
Total special students	99	62.24	33.31	3.5	0.01
Total integrated students	35	91.85	45.57		

For knowing the significance of difference between the two means, the 't' value was calculated and found to be 3.5 which is highly significant.

It can be clearly concluded from the results that the total integrated students were far more creative than the total special students.

When the special boys and integrated boys were compared on the measure of creativity it was found that the mean score of special boys was 66.85 and the mean score of integrated boys was 99.53 and their SD_s were found to be 35.32 and 43.52 respectively as shown in table 7 .

TABLE 7

Showing significance of difference between the mean scores of visually impaired special boys and visually impaired integrated boys on creativity measure.

Subjects	N	Mean	SD	't' Value	Level of Significance
Special school boys	57	66.85	35.32	2.56	.05
Integrated school boys	30	99.53	43.52		

The two means were put to 't' test for knowing the significance of difference between them and the value of 't' was found to be 2.56 which is significant at .05 level.

It can be inferred from the results that the integrated boys were, however, more creative than the special boys though the difference was of moderate nature.

The mean scores of special school girls and integrated school girls were found to be 55.97 and 99.8 and their SD_s were found to be 29.23 and 55.67 respectively. The 't' value is insignificant as can be seen from table 8 .

TABLE 8

Showing significance of difference between the mean scores of visually impaired special school girls and visually impaired integrated school girls on creativity measure.

Subjects	N	Mean	SD	't' Value	Level of Significance
Special school girls	42	55.97	29.23	1.73	N.S.
Integrated school girls	5	99.8	55.67		

The results thus clearly show that both the groups, i.e., special school girls and integrated school girls were similar on creativity measure.

On the measure of creativity the mean scores of special school boys and special school girls were found to be 66.85 and 55.97 and their SD_s were found to be 35.32 and 29.23 respectively as shown in table 9 .

TABLE 9

Showing significance of difference between the mean scores of visually impaired special school boys and visually impaired special school girls on creativity measure.

Subjects	N	Mean	SD	t Value	Level of Significance
Special school boys	57	66.85	35.32	1.67	N.S.
Special school girls	42	55.97	29.23		

The 't' value was calculated for knowing the significance of difference between the two means and was found to be 1.67 which is insignificant.

The 't' value thus clearly shows that the two groups did not show any marked difference on the measure of creativity, though the special school boys enjoyed an edge over their counterparts.

When the integrated school boys and integrated school girls were compared on the measure of creativity, the mean scores of the groups were found to be 51.2 and 99.8 and their SD_s were found to be 15.72 and 55.67 respectively. For knowing the significance of difference between two means, 't' value was calculated and was found to be 1.93 which is insignificant as shown in table 10 .

TABLE 10

Showing significance of difference between the mean scores of visually impaired integrated school boys and visually impaired integrated school girls on creativity measure.

Subjects	N	Mean	SD	't' Value	Level of Significance
Integrated school boys	30	51.2	15.72	1.93	N.S.
Integrated school girls	5	99.8	55.67		

The results thus clearly indicate that both the groups did not differ considerably on the measure of creativity, however, the integrated school girls enjoyed an edge over the integrated school boys.

The results of the comparisons presented in tables 6 to 10 can be summarized as under.

1. The total integrated students were far more creative than the total special students. (TABLE 6)

2. The integrated school boys were more creative than the special school boys. (TABLE 7)

3. The special school girls and integrated school girls did not show any considerable difference on the measure of creativity. (TABLE 8)

4. The special school boys and special school girls also were almost similar on the measure of creativity. (TABLE 9)

5. The integrated school boys and integrated school girls too did not show any considerable difference on creativity measure, however, integrated school girls enjoyed an edge over the integrated school boys. (TABLE 10)

Comparisons on Fourteen Personality Factors of HSPQ :-

As mentioned earlier an attempt was made to explore the differences between the comparison groups along the fourteen dimensions of personality.

Comparison Between Total Special And Total Integrated Visually Impaired Students On Fourteen Personality Factors (H.S.P.Q.) :-

Table 11 shows the differences between total special and total integrated visually impaired students on fourteen personality factors measured with Cattell and Beloff's H.S.P.Q., form A .

Total special students differ significantly from the total integrated students on three personality factors namely Undemonstrative Vs Excitable (D), Shy Vs Adventurous (H) and Relaxed Vs Tense (Q_4). On the rest of the factors differences between the two groups are insignificant, as can be seen from table 11 .

As for 'D' factor, Undemonstrative Vs Excitable, on which the high score, represent excitability and the low scores undemonstrative personality characteristics, the means of total special students and total integrated students were found to be 7.30 and 5.94 and their SD_s were 2.65 and 2.32 respectively. The 't' value was found to be 2.65 which is significant at

TABLE 11

Showing significance of difference between the mean scores of total special students and total integrated visually impaired students on Fourteen Personality Factors.

Personality Factors	Total Special Students (N=99)		Total Integrated Students (N=35)		't' Value	Level of Sig.
	Mean	SD	Mean	SD		
A. Reserved - Warm hearted	8.37	2.80	8.71	2.63	0.64	N.S.
B. Less intelligent - More intelligent	4.62	1.53	4.85	1.51	0.77	N.S.
C. Affected by feeling - Emotionally stable	7.82	2.23	7.77	2.02	0.12	N.S.
D. Undemonstrative - Excitable	7.30	2.65	5.94	2.32	2.89	0.01
E. Obedient - Assertive	6.37	2.56	6.65	2.16	0.62	N.S.
F. Sober - Enthusiastic	8.25	2.56	7.48	2.04	0.55	N.S.
G. Disregards rules - Conscientious	10.96	2.71	11.37	2.42	0.83	N.S.
H. Shy - Adventurous	8.69	2.26	7.71	2.73	1.92	.05
I. Tough minded - Tender minded	9.45	2.84	9.62	2.21	0.36	N.S.
J. Zestful - Circumspect individualism	7.84	2.32	7.48	2.33	0.80	N.S.
O. Self assured - Apprehensive	7.69	2.56	7.71	2.17	0.04	N.S.
Q_2. Sociably group dependent - Self sufficient	8.23	3.04	8.80	2.60	1.07	N.S.
Q_3. Uncontrolled - Controlled	9.63	2.57	9.85	2.58	0.44	N.S.
Q_4. Relaxed - Tense	8.24	2.58	9.02	2.09	1.81	0.05

0.01 level. Since the mean of total integrated students was lower than the total special students, it can be concluded that the total integrated students were less excitable and less impatient than the total special students.While the total special students were more excitable and impatient than their counterparts.

On 'H' factor namely Shy Vs Adventurous, on which the high scorers were prone to be adventurous, thick-skinned and socially bold temperament and low scorers possess shy, timid and threat sensitive characteristics of personality. The special school students had 8.69 as their mean score with an SD of 2.26, on the other hand, the total integrated students had a lower mean score, i.e.,7.71 with an SD of 2.73.

For knowing the significance of difference between the two means, the 't' value was calculated and found to be 1.92 which is significant at 0.05 level.

The results thus clearly indicate that the total special students are more adventurous than the total integrated students and conversely the total integrated students were more shy than the total special students.

On the factor represented by Q_4, Relaxed Vs Tense, the high scorers on this measure are tense, frustrated and fretful and low scorers are relaxed, unfrustrated and composed.

The means of total special and total integrated students were 8.24 and 9.02 and their SD_s were 2.58 and 2.09 respectively as can be seen from table 11. And the 't' value was found to be 1.81 which is very close to significant value at 0.05-level.

It can be inferred from the results that total integrated students were more tense than the total special students and conversely the total integrated students were less relaxed than the total special students.

On the rest of the factors, i.e. A, B, C, E, F, G, I, J, O, Q_2 and Q_3 the differences were insignificant.

The findings may be summarized as under.

Total special students.

1. Excitable
2. Adventurous
3. Relaxed

Total integrated students.

1. Undemonstrative
2. Shy
3. Tense

Comparisons between Special School boys and Integrated School boys on Fourteen Personality Factors (H.S.P.Q.) :-

As can be seen from table 12 the special school boys and integrated school boys differ significantly on four factors namely Undemonstrative Vs Excitable (D), Tough minded Vs Tender minded (I), Sociably group dependent Vs Self-sufficient (Q_2) and Relaxed Vs Tense (Q_4). On the rest of ten factors differences between the groups were insignificant.

The special school boys and integrated school boys differ significantly on 'D' factor of personality, i.e., Undemonstrative Vs Excitable. The high scorers on this factor are excitable and the low scorers are undemonstrative.

The special school boys had higher mean score 7.17 than that of the integrated school boys, 5.83 while the SD_s were 2.64 and 2.39 respectively, as can be seen from table 12. The 't' value was found to be 2.45 which is significant at 0.05 level.

The results thus suggest that the special school boys were more excitable than the integrated school boys, Or the integrated school boys were more undemonstrative than the special boys.

On factor 'I' Tough minded Vs Tender minded the means of special school boys and integrated school boys were 8.50

and 9.60 and SD_s 2.95 and 2.31 respectively. The 't' value as can be seen from table 12 was 1.92 which is significant at 0.05 level. The low scorers on this measure are Tough minded and the high scorers on this measure are Tender minded.

The results thus clearly indicate that on 'I' factor of personality the integrated school boys were more tender minded than the special school boys while the special school boys were more Tough minded than the integrated school boys.

As can be seen from table 12 there is a significant difference between the mean scores of special school boys and integrated school boys on 'Q_2' factor of personality namely Sociably group dependent Vs Self-sufficient. The high scorers on this measure represent self-sufficient and resourceful, and they prefer their own decisions. On the other hand the low scorers are sociably group dependent, joiner and sound followers.

The mean scores of special school boys and integrated school boys were 7.33 and 8.63 and their SD_s were found to be 2.13 and 2.66 respectively. The 't' value was found to be 2.13 which is significant at 0.05 level.

It is thus inferred from the results that on factor Q_2 the integrated school boys were more self-sufficient than the special school boys, or in other words, the special school boys were more sociably group dependent than the integrated school boys.

On factor Q_4, namely, Relaxed Vs Tense, the high scorers are Tense, frustrated and fretful and the low scorers are relaxed, composed and unfrustrated.

As shown in the table 12 the special school boys had significantly lower mean scores, 7.56 than that of the integrated school boys 9.13 and their SD_s were 2.49 and 2.17 respectively. The 't' value was found to be 3.07 which is significant at 0.01 level.

It can be concluded from the results that the special school boys were far less tense than the integrated school boys. The special school boys were more relaxed than the integrated school boys.

On the remaining 10 factors denoted by alphabets A,B,C, E,F,G,H,J,O and Q_3, the differences between the two groups were insignificant.

The special boys and integrated boys may, thus, be characterised as under.

Special school boys.

1. Excitable
2. Tough minded
3. Sociably group dependent
4. Relaxed

TABLE 12

Showing significance of difference between the mean scores of visually impaired special school boys and visually impaired integrated school boys on Fourteen Personality Factors.

Personality Factors	Special Boys (N = 57)		Integrated Boys (N = 30)		't' Value	Level of Sig.
	Mean	SD	Mean	SD		
A. Reserved - Warm hearted	8.82	2.58	8.76	2.72	0.1	N.S.
B. Less intelligent - More intelligent	4.19	1.57	4.73	1.54	1.5	N.S.
C. Affected by feeling - Emotionally stable	8.22	2.24	8.16	1.86	0.13	N.S.
D. Undemonstrative - Excitable	7.17	2.64	5.83	2.39	2.45	.05
E. Obedient - Assertive	6.61	2.47	6.53	2.23	0.15	N.S.
F. Sober - Enthusiastic	7.94	2.26	7.50	2.14	0.88	N.S.
G. Disregards rules - Conscientious	10.66	2.56	11.50	2.47	1.50	N.S.
H. Shy - Adventurous	8.71	2.21	7.86	2.83	1.46	N.S.
I. Tough minded - Tender minded	8.50	2.95	9.60	2.31	1.92	.05
J. Zestful - Circumspect individualism	7.19	2.37	7.20	2.25	0.01	N.S.
O. Self assured - Apprehensive	7.14	2.27	7.50	2.21	0.72	N.S.
Q_2. Sociably group dependent - Self sufficient	7.33	2.82	8.63	2.66	2.13	.05
Q_3. Uncontrolled - Controlled	9.47	2.58	9.76	2.72	.48	N.S.
Q_4. Relaxed - Tense	7.56	2.49	9.13	2.17	3.07	.01

Integrated school boys.

1. Undemonstrative
2. Tender minded
3. Self-sufficient
4. Tense

Comparisons between Special school girls and integrated school girls on Fourteen Personality Factors :-

Comparisons were made between special school girls and integrated school girls on the measure of personality. The significant difference between the groups were found on factor 'C' and factor 'H', namely, Affected by feelings Vs Emotionally stable and Shy Vs Adventurous respectively. On the rest of the factors the differences between the two groups were insignificant.

On factor 'C', namely, Affected by feelings Vs Emotionally stable the mean scores of special school girls and integrated school girls were found to be 7.28 and 5.4 and their SD_s were found to be 2.10 and 1.35 respectively. The 't' value was calculated for knowing the significance of difference between the means. The value of 't' was found to be 2.74 which is significant at .01 level as presented in table 13 .

It is concluded from the results that the special school girls were more emotionally stable than the integrated school girls, or in other words, the integrated school girls were more affected by the feelings than the special school girls.

On factor 'H',i.e.,Shy Vs Adventurous the high scorers are adventurous while the low scorers are Shy. Comparisons were also made between special school girls and integrated school girls on 'H' factor of personality. The mean scores of the two comparison groups were found to be 8.66 and 6.8 and their SD_s were found to be 2.32 and 1.72 respectively.

The means were put to 't' test for knowing the significance of difference between the two means. The 't' value was found to be 2.19, which is significant at .05 level as can be seen from table 13 .

The results, thus, clearly show that integrated school girls were timid, restrained, threat sensitive and shy while the special school girls were thick skinned, socially bold and adventurous.

Though on the remaining twelve factors the comparisons did not reveal significant differences, yet on factor E, Obedient Vs Assertive the integrated school girls enjoyed an edge over the special school girls, the integrated school girls being a bit more assertive than their counterparts, the special school girls, as the mean differences showed a 't' value of 1.83 which is very close to .05 level.

TABLE 13

Showing significance of difference between the mean scores of visually impaired special school girls and visually impaired integrated school girls on Fourteen Personality Factors.

Personality Factors	Special girls (N = 42)		Integrated girls (N = 5)		't' Value	Level of Sig.
	Mean	SD	Mean	SD		
A. Reserved - Warm hearted	7.54	2.48	8.40	1.95	.90	N.S.
B. Less intelligent - More intelligent	5.21	1.26	5.6	1.01	.79	N.S.
C. Affected by feeling - Emotionally stable	7.28	2.10	5.4	1.35	2.74	.01
D. Undemonstrative - Excitable	7.23	2.86	6.6	1.74	.70	N.S.
E. Obedient - Assertive	6.04	2.14	7.4	1.49	1.83	N.S.
F. Sober - Enthusiastic	8.66	2.86	7.4	1.35	1.68	N.S.
G. Disregards rules - Conscientious	11.38	2.85	10.6	1.95	.79	N.S.
H. Shy - Adventurous	8.66	2.32	6.8	1.72	2.19	.05
I. Tough minded - Tender minded	10.73	2.08	10.20	.74	1.08	N.S.
J. Zestful - Circumspect individualism	8.71	1.95	9.2	2.03	0.51	N.S.
O. Self assured - Apprehensive	8.59	2.58	9.0	0.89	0.73	N.S.
Q_2. Sociably group dependent - Self sufficient	9.61	2.75	9.8	1.93	0.19	N.S.
Q_3. Uncontrolled - Controlled	9.83	2.58	10.4	1.36	0.87	N.S.
Q_4. Relaxed - Tense	9.19	2.39	8.2	1.32	1.42	N.S.

The results from table 13 may be summarized as follows :

Special school girls.

1. Emotionally stable
2. Adventurous
3. Obedient

Integrated school girls.

1. Affected by feelings
2. Shy
3. Assertive

Comparisons between Special school boys and Special school girls on Fourteen Personality Factors (H.S.P.Q.) :-

Special school boys differ significantly from the special school girls on eight personality factors, namely, Reserved Vs Warm hearted (A), Less intelligent Vs More intelligent (B), Affected by feelings Vs Emotionally stable (C), Tough minded Vs Tender minded (I), Zest-ful Vs Circumspect individualism (J), Self assured Vs Apprehensive (O), Sociably group dependent Vs self sufficient (Q_2) and Relaxed Vs Tense (Q_4). On the rest of the factors the differences of the two groups are insignificant, as shown in table 14 .

On factor A, namely, Reserved Vs Warm hearted, the high scores represent warm hearted, easy going, participating and out going characteristics of personality and the low scores reserved, stiff temperament, critical and alloof.On this personality factor the mean scores of special school boys and special school girls were 8.82 and 7.54 and their SD_s were 2.58 and 2.48 . The value of 't' was calculated for knowing the significance of difference between the two means. The value of 't' was found to be 2.50 which is significant at 0.05 level.

The results, thus, clearly show that the special school girls are more reserve than the special school boys, and conversely special school boys are more warm hearted participating and out going than the special school girls.

On factor 'B' namely, Less intelligent Vs More intelligent on which high scorers are counted more intelligent and low scorers less intelligent, the mean scores of special school boys and special school girls were 4.19 and 5.21 and their SD_s were 1.57 and 1.26 respectively as can be seen in the table 14. The 't' value was found to be 3.6 which is significant at 0.01 level.

The result thus reveal that the special school girls were superior to the special school boys on intelligence represented through B factor of H.S.P.Q.

As can be seen from table 14, on factor C, Affected by feelings Vs Emotionally stable; the means of special school boys and special school girls on this measure were 8.22 and

TABLE 14

Showing significance of difference between the mean scores of visually impaired special school boys and visually impaired special school girls on Fourteen Personality Factors.

Personality Factors	Special Boys (N=57)		Special Girls (N=42)		't' Value	Level of Sig.
	Mean	SD	Mean	SD		
A. Reserved - Warm hearted	8.82	2.58	7.54	2.48	2.50	.05
B. Less intelligent - More intelligent	4.19	1.57	5.21	1.26	3.60	.01
C. Affected by feeling - Emotionally stable	8.22	2.24	7.28	2.10	2.14	.05
D. Undemonstrative - Excitable	7.17	2.64	7.23	2.86	0.10	N.S.
E. Obedient - Assertive	6.61	2.47	6.04	2.14	1.23	N.S.
F. Sober - Enthusiastic	7.94	2.26	8.66	2.86	1.35	N.S.
G. Disregards rules - Conscientious	10.66	2.56	11.38	2.85	1.29	N.S.
H. Shy - Adventurous	8.71	2.21	8.66	2.32	0.10	N.S.
I. Tough minded - Tender minded	8.50	2.95	10.73	2.08	4.43	.01
J. Zestful - Circumspect individualism	7.19	2.37	8.71	1.95	3.51	.01
O. Self assured - Apprehensive	7.14	2.27	8.59	2.58	2.91	.01
Q_2. Sociably group dependent - Self sufficient	7.33	2.82	9.61	2.75	4.04	.01
Q_3. Uncontrolled - Controlled	9.47	2.58	9.83	2.58	0.68	N.S.
Q_4. Relaxed - Tense	7.56	2.49	9.19	2.39	3.30	.01

and 7.28 and SD_s 2.24 and 2.10 . The 't' value was found to be 2.14, which is significant at 0.05 level. The low scorers on this personality factor denote emotionally less stable temperament and lower ego strength while the high scorers show emotional stability and higher ego strength.

It is inferred from the result that special school boys are emotionally more stable and possess greater ego strength while the special school girls are emotionally less stable, possess lower ego strength and affected by feelings very quickly.

As shown in the table 14 there is a highly significant difference between the mean scores of special school boys and special school girls on factor (I), namely, Tough minded Vs Tender minded. The mean scores were found to be 8.50 and 10.73 and SD_s were 2.95 and 2.08 respectively. The 't' value was found to be 4.43 which is significant at 0.01 level. It is,therefore, clearly concluded from the results that special school girls are included to tender mindedness while the special school boys are inclined to tough mindedness.

On 'J' factor, namely, Zest-ful Vs Circumspect individualism as can be seen from table 14, there is again a highly significant difference between the special school boys and special school girls. The mean score of the special school boys was found to be 7.19 and of special school girls 8.71 while SD_s were found to be 2.37 and 1.95 respectively. The difference between the two means was significant at 0.01 as the 't' value

was 3.51 . Thus, it can be safely concluded from the results that the special school girls are more prone to circumspect individualism than the special school boys.

On factor 'Q' there is quite significant difference between the special school boys and special school girls which represents Self assured Vs Apprehensive personality. The mean scores were found to be 7.14 and 8.59 and SD_s 2.07 and 2.58 respectively. The 't' value was 2.91, which is significant at .01 level.

The high scorers on this factor stand for apprehensive, insecure and guilt prone and the low scores for self-assured, secure and untroubled.

It may be concluded from the results that special school girls are having insecurity and guilt prone temperament in their personality while the special school boys are self-assured, secure and untroubled.

On 'Q_2' factor of personality, namely, sociably group dependent Vs self sufficient, the high scorers are self-sufficient and resourceful and they like their own decisions while the low scorers are sociably group dependent, sound followers and joiners.

There is highly significant difference between the mean scores of special school boys and special school girls on Q_2 personality measure. The mean scores of the two groups were

7.33 and 9.61 and their SD_s were 2.82 and 2.75 respectively. The 't' value was 4.04 which is highly significant at 0.01 level as can be seen from table 14 .

The results, thus, clearly indicate that special school girls are far more self-sufficient, resourceful and prefer their own decisions while the special school boys are sociably group dependent and joiners.

As can be seen from table 14, comparison, which were made between special boys and special girls on factor Q_4 designated as Relaxed Vs Tense, also show significant difference between the two groups. The mean scores of the special school boys and special school girls were found to be 7.56 and 9.19 and SD_s were 2.49 and 2.39 respectively as shown in table 14 . The 't' value was found to be 3.30 which is significant at 0.01 level.

The high scorers on this measure are Tense, Frustrated and Fretful while the low scores are Relaxed, Composed and Unfrustrated.

It is, thus, concluded from the results obtained that the special school girls with their higher mean score are more tense, frustrated and fretful while the special school boys are relaxed unfrustrated and composed.

From the results presented in table 14, it can be concluded that special school boys and special school girls

possess the following personality characteristics :

Special school boys.

1. Warm hearted
2. Less intelligent
3. Emotionally stable
4. Tough minded
5. Zest-ful
6. Self assured
7. Sociably group dependent
8. Relaxed

Special school girls.

1. Reserved
2. More intelligent
3. Affected by feelings
4. Tender minded
5. Circumspect individualism
6. Apprehensive
7. Self sufficient
8. Tense

Comparisons between Integrated School boys and Integrated School girls on Fourteen Personality Factors :-

As can be seen from table 15 the integrated school

boys and integrated school girls differ significantly on three personality dimensions, i.e.,factor 'C' factor 'J' factor 'Q' namely, Affected by feelings Vs Emotionally stable, Zest-ful Vs Circumspect individualism, self-assured Vs Apprehensive respectively. On rest of the eleven factors the difference between two groups were insignificant.

As for 'C' factor of personality designated as Affected by feelings Vs Emotionally stable, on which the high scorers are identified as emotionally stable, calm and possessing higher ego strength while the low scorers, on the other hand, are affected by feelings emotionally less stable and exhibiting lower ego strength.

The comparisons revealed that the mean scores of integrated school boys and integrated school girls were 8.16 and 5.4 and their SD_s were found to be 1.86 and 1.35 respectively. The 't' value was found to be 3.98 which is significant at 0.01 level.

The results, thus, clearly bring out that the integrated school boys were distinctly emotionally stable, calm and possessed higher ego strength while the integrated girls were emotionally less stable, upset easily, and possessed far lower ego strength.

On factor 'J' namely, zest-ful and circumspect individualism, the high scorers exhibit circumspect individualism

TABLE 15

Showing significance of difference between the mean scores of visually impaired integrated school boys and visually impaired integrated school girls on Fourteen Personality Factors.

Personality Factors		Integrated Boys (N = 30)		Integrated Girls (N = 5)		't' Value	Level of Sig.
		Mean	SD	Mean	SD		
A.	Reserved - Warm hearted	8.76	2.72	8.4	1.95	.36	N.S.
B.	Less intelligent - More intelligent	4.73	1.54	5.6	1.01	1.64	N.S.
C.	Affected by feeling - Emotionally stable	8.16	1.86	5.4	1.35	3.98	.01
D.	Undemonstrative - Excitable	5.83	2.39	6.6	1.74	.86	N.S.
E.	Obedient - Assertive	6.53	2.23	7.4	1.49	1.11	N.S.
F.	Sober - Enthusiastic	7.5	2.14	7.4	1.35	0.14	N.S.
G.	Disregards rules - Conscientious	11.5	2.47	10.6	1.95	0.91	N.S.
H.	Shy - Adventurous	7.86	2.83	6.8	1.72	1.15	N.S.
I.	Tough minded - Tender minded	9.6	2.31	10.2	0.74	1.13	N.S.
J.	Zestful - Circumspect - individualism	7.2	2.25	9.2	2.03	2.02	.05
[illegible]	Self assured - Apprehensive	7.5	2.21	9.0	0.89	2.65	.05
Q_2.	Sociably group dependent - Self sufficient	8.63	2.66	9.8	1.93	1.18	N.S.
Q_3.	Uncontrolled - Controlled	9.76	2.72	10.4	1.36	.82	N.S.
Q_4.	Relaxed - Tense	9.13	2.17	8.2	1.32	1.30	N.S.

(i.e. reflective and internally restrained) and low scorers possess zestful characteristics of personality and like group action.

When the integrated school boys and integrated school girls were compared on factor 'J' of H.S.P.Q. The mean scores of the two groups were found to be 7.2 and 9.2 and their SD_s were found to be 2.25 and 2.03 respectively. For knowing the significance of difference between the two means, the 't' value was calculated and found to be 2.02 which is significant at .05 level as presented in table 15 .

It is concluded from the results that integrated school girls were more reflective, internally restrained and possessed circumspect individualism while the integrated school boys were zestful and showed a tendency to like group action.

On Self-assured Vs Apprehensive denoted by factor 'Q' the subjects scoring high on this factor possess Self-assured, Placid, Secure and Untroubled characteristics of personality while the low scorers possess Self-reproaching, Insecure and Apprehensive characteristics in their personality.

Comparisons were then made between integrated school boys and integrated school girls on factor 'Q'. The mean scores and SD_s of integrated school boys were found to be 7.5 and 2.21 and of the integrated school girls were found to be 9 and 0.89 respectively as can be seen from table 15 .

The mean scores, i.e.,7.5 and 9 were put to 't' test for knowing the significance of difference between the two groups. The 't' value was found to be 2.65 which is significant at .05 level.

It is inferred from the results that integrated school girls were apprehensive and insecure while the integrated school boys were self-assured and secure.

The integrated school boys and integrated school girls did not show any significant difference on the rest of the eleven factors of personality.

The findings shown in table 15 may be summarised as under :-

Integrated school boys were found to be .

1. Emotionally stable
2. Zest-ful
3. Self-assured

Integrated school girls were found to be :

1. Affected by feelings
2. Circumspect individualism
3. Apprehensive

A detailed discussion of the results is presented in the next Chapter.

CHAPTER V

DISCUSSION

As mentioned in the earlier Chapters comparisons were made on intelligence, creativity and fourteen personality factors between the pairs of groups, namely (1) total special and total integrated students, (2) special school boys and integrated school boys, (3) special school girls and integrated school girls, (4) special school boys and special school girls, (5) integrated school boys and integrated school girls among the blind subjects.

Results on Intelligence :-

As for intelligence the comparisons revealed no significant difference between the levels of intelligence of the blind subjects studying in special school environment and those studying in integrated environment. This very result is quite interesting and also useful in the sense that the total population exhibited a sort of homogeneity on the measure of intelligence as such it is very helpful in identifying more sharply the differences of other variables both in cognitive and non-cognitive domain.

Thus the first hypothesis of the present study, "there shall not be very significant differences between the blind students studying in the special school environment and the blind students studying in the integrated school environment on the measure of intelligence", stands confirmed.

The comparisons between the special school boys and integrated school boys on intelligence also did not yield any significant difference and only a difference of moderate significance was found when special school girls were compared with integrated school girls on intelligence. The integrated school girls showed an edge over their counterparts, the girls in special schools.

In the case of boys also, the boys in integrated schools scored slightly higher than the boys in the special schools, though the difference was insignificant. This little superiority of the integrated schools is quite understandable in the sense that they provide more challanging opportunities for the growth of mental abilities as both the sexes are vying with each other in all their school activities.

As such the second hypothesis, "comparisons between the boys in special and integrated schools as well as the girls in special and integrated school environment will not reveal significant differences on intelligence", of the present work stands partly accepted and partly rejected.

When sex-wise comparisons were made with the same environment, in the case of special schools, boys and girls did not show any significant difference on intelligence, but in the case of integrated schools, the girls were moderately superior to boys. It is not very much surprising now-adays when the girls are found to be more involved and better informed in general. (Blair et.al,1975, p.139). Our own experiences in the schools also bear a conforming note in this regard.

Thus the third hypothesis of the present work regarding the sex differences on intelligence, "There may be some differences on intelligence between the male and female subjects in both the school environments, special and integrated", once again stands partly rejected and partly accepted.

Results on Creativity :-

The results on creativity are quite provocating for the research workers. When the total special school subjects were compared with the integrated school subjects,it was found that the blind in the integrated school were far more creative than their counterparts in the segregated special school environment. A further analysis of the results involving the comparisons between special school boys and integrated school boys as well as special school girls and integrated school girls on the measure of creativity revealed a tendency of the superiority of integrated school in providing more favourable environment for the creative potential of the children in

comparison to the special schools. In this regard the integrated school boys exhibited sharper and more positive difference than the integrated school girls when compared to their counterparts in their special school environment.

The superiority of the integrated school environment for creativity is quite understandable as the integrated schools are more challenging and therefore more stimulating and more stirring for the minds of the pupils to exhibit their creative potential than the special school environment where every one is sailing in the same boat.

The above results pointing to the superiority of the integrated school environment in boosting up the abilities of children are also supported by the findings of singh,1984; Jurrmaa,1984; Sungin,1989; on different variables.

Thus the fourth hypothesis, "on the measure of creativity it is expected that the blind students in the integrated school environment will be more creative than their counterparts in the special school environment," and also the fifth one, "the boy, and girls in the integrated school environment will exhibit a higher level of creativity than their counterparts in the special school environment stands confirmed.

The next two comparisons between boys and girls of the same school environment (i.e. special school boys Vs special school girls and integrated school boys Vs integrated school girls) did not show any significant difference.

The reason seems quite understandable, since the comparisons were made between the boys and girls no doubt, but they came from the same school environment as the earlier results have proved a similarity of levels of creativity, i.e., low for boys and girls, both coming from special school environment and high for both the sexes studying in the integrated school environment, it seems quite natural that when comparisons are made between the boys and girls within the same environments, special or integrated. The differences are quite understandably not going to be of any considerable significance.

As such the sixth hypothesis, "the inter-sex comparisons within the same school environment will also show the superiority of girls over the boys on the measure of creativity", stands rejected.

Results on Personality :-

In respect of personality characteristics, the results of comparisons between the stipulated pairs of groups were found to be even more interesting and logically appreciable. There is found to be a very sharp difference between the special school children when compared with the integrated school children on the measure of excitability. The blind children in the special segregated school were found to be far more excitable than those studying in the integrated schools and it is not very much surprising as shown by the results on creativity where they stand at a very low level which is itself enough

to make one aggressive, arrogant, irritable and excitable. There is also a saying of a similar tone, "ignorance goes with arrogance". Just opposite is true for the integrated school groups who are high on creativity and less excitable in their personality.

The difference on 'H' factor, i.e.,shy Vs adventurous, between the two groups, special and integrated are quite in consonance with the above results. Here again the subjects in special, segregated school environment so far found to be low on creative and high on excitability seem to be quite naturally more dashing and adventuresome while those in the integrated school environment exhibit quite reasonably a reserved characteristic and a sort of shyness and humility which is the mark of high scorers in our daily experience. This very group was found to be more creative and less demonstrative and less excitable in the previous results.

The high level of creativity demands along with reservedness a degree of positive mental tension or a healthy degree of anxiety. It is therefore, not very surprising that the integrated school children who are high on creativity but low on excitability are a bit tense also and not so carefree and relaxed as their counterparts in the unchallanging special and segregated environment, as the results on Q_4, relaxed Vs tense of the present study have demonstrated.

Thus the seventh hypothesis of the present research worker, "It is expected that on personality characteristics there shall be some differences between the blind studying in the special school environment and those studying in integrated school environment, "stands confirmed.

When the comparisons were made between the special school boys and the integrated school boys on different personality factors a clear-cut tendency was found in relation to factor D,i.e.,excitable Vs undemonstrative as well as in factor Q_4 relaxed Vs tense, "tendency in the sense that what was witnessed in the earlier comparisons between the total special school children and integrated school children was also found between the boys of the two environment respectively. Quite in consonance with the previous results on the factor 'D' the special school boys were found to be more excitable than the integrated school boys as such the explanation presented for the previous result on 'D' factor stands quite true over here also.

On factor 'Q_4' the special school boys were found to be even more significantly carefree than the integrated school boys who exhibited a healthy level of anxiety and tenseness as was found in the case of previous comparisons between the total special school subjects and the integrated school blind subjects. The result needs no further repeatition of the logic, however, since the difference is sharper in the case of boys it may be added that in the unchallanging segregated school

situation boys felt still more unconcerned and free from care than their counterparts who exhibited a high degree of carefulness and healthy anxiety.

Some new personality differences also appeared when the special school blind boys were compared with the integrated school blind boys. The special school boys were found to be tough minded (I) and socially group dependent (Q_2) while the integrated school blind boys were inclined to tender mindedness (I) and self sufficiency (Q_2). The differences were of a moderate level no doubt, but very much in tune with results on 'D' and 'Q_4' factors discussed above. It seems quite natural that those who develop a carefree tendency and lack in the sense of responsibility have to depend on others. Therefore, it is not very startling if such people exhibit group dependence while their counterparts in integrated schools who were found to be more serious and careful and tense to healthy extent showed a reasonable level of readiness, alertness and self-sufficiency to shoulder their responsibility.

The results on factor 'I' showed that the special school boys are a bit tough minded while the integrated school boys are inclined to tender mindedness. The results appear to be quite natural in the sense that the relaxed, sociably group dependent are generally more tough minded as evidenced by the psychology of "gang behaviour"in the period of adolescence. Excitability and aggressiveness are quite common characteristics

of the gangs in this period (Conger,1977). The irresponsible boys as it is also a common experience quite frequently exhibit these characteristics as found in the present study.

The reverse is true for the careful and self sufficient boys of the integrated school who quite undemonstratively shoulder their responsibilities and dislike distractions. For them it is not very queer and surprising that they are a bit more tender minded.

When comparisons were made between the groups of female subjects studying in the special segregated school environment and the blind girls in the integrated school environment two new factors emerge as their areas of difference in personality. The blind girls in the special schools were found to be emotionally stable (C) and adventurous (H) while the blind girls studying in the integrated school environment were found to be affected by feelings (C) and a bit more shy (H).

The earlier results have already evidenced that those studying in special and segregated school environment are rather unconcerned and careless as their school environment is not much provocative and challenging. Hence it is not very much unexpected that the girls also in the special school environment are more stable emotionally and more adventurous rather than more concerned about their target tasks. As a corollary of this result the reverse seems to be quite true

for the blind girls studying in the integrated school environment were more sensitive self-centred and shy enough to remain within their stipulated fields rather than be dashing daring and adventurous.

As such the eighth hypothesis of the present worker, "there may be a few differences of personality characteristics between the boys of the two school environments as well as the girls of the two school environment, i.e., special and integrated," stands confirmed.

When the sex differences were explored on personality dimensions between boys and girls of special school environment six areas were found to be of high significance namely factors 'B', 'I', 'J', 'O', 'Q_2' and 'Q_4' and two of moderate significance namely 'A' and 'C' .

Thus the special school blind boys emerged as less intelligent, tough minded, zestful, self-assured, socially group dependent and relaxed. They were also inclined toward warm heartedness and emotional stability. The special school blind girls on the other hand were high in intelligence, tender minded possessing circumspect individualism and exhibiting apprehensiveness, self sufficiency and ergic tension. They were also moderately reserved and affected by feelings.

These sex differences are quite understandable in the light of differential characteristics found with the

adolescent boys and girls (Harlock,1974; Conger,1977) as well as our day-to-day observations in teaching and learning experiences. The girls are generally more involved in their studies and possess a better awareness of their school subjects which is the result of their aptitude and intelligence also in comparison to the boys.

As discussed earlier, boys are generally more tough-minded, adventurous, enthusiastic while the girls being tender by nature are more tender-minded and more concerned about themselves, with a lot of shyness and apprehensions in comparison to the male counterparts. It is also quite reasonable that the girls being superior in their aptitudes feel more self-sufficient and more concerned about their own-self and their performance than the male counterparts who feel more carefree more self-assured and more associated with their gangs and groups of friends. In the light of these differences the warm-heartedness and emotional stability moderately going with the boys and the reservedness and greater sensitiveness going with the girls are quite understandable (Neog,1990).

When the integrated school blind boys were compared with the blind girls of the integrated school once again emotional stability (C), zestfulness (J) and self-assuredness (O) were found to be the male characteristics, and affected by feelings (C), circumspect individualism (J), and apprehensiveness (O) appeared as the female characteristics. The recurrence of

the male and female characteristics further validates the defferential personality characteristics of the blind boys and girls. Quite explainable on the lines discussed above in the case of special school boys and special school girls.

In the light of the above findings and their discussion the nineth hypothesis of the present worker, "There shall be no significant differences in personality characteristics between the boys and girls if compared in the same school environment," stands rejected.

Thus the present study being a humble exploratory attempt to identify the cognitive and non-cognitive personality characteristics of the blind children in special and integrated school environment, may be taken to be threshold work, inviting the interested workers for further explorations and opening new vistas and avenues of research.

The next Chapter presents a summary of results and a few necessary suggestions.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Right from the days of Homer to the modern time we are living in, there has been a galaxy of stars among the blind whose contributions in different fields of arts and sciences are enviable and challenging even to their sighted counterparts. But it is a tragedy that the majority of blind people has always been neglected in the sense that their potentialities could neither be identified nor encouraged and utilized in their respective periods. If one could shine, hundred and one went to their graves unrecognised. However, it is a sanguine sign that quite recently the world has awakened to feel concerned about the neglected lot of the blind.

It has been estimated that there are atleast 28 million blind in the world, if blindness is defined as inability to count fingers at a distance of 3 metres (less than 3/60 or its equavalent). This definition is recommended by W.H.O. In India, there are 3.47 million blind, or 0.5 per cent of the population. (Park and Park, 1991) .

The present study is thus a humble attempt in this regard, "A comparative study of cognitive and non-cognitive personality dimensions of visually impaired students studying in special and integrated educational settings".

The study has been taken up with the following objectives.

Differences on Intelligence :-

1. To explore the differences on intelligence between the blind students studying in the special school environment and the blind students studying in the integrated school environment.

2. To find out the sex-wise differences on intelligence between the blind subjects in their special and integrated environment.

3. To identify the inter-sex differences within special school environment on intelligence.

4. To measure the inter-sex differences on intelligence within the integrated school environment.

Differences on Creativity :-

1. To find out the differences on creativity between the blind students studying in special school environment and blind students studying in the integrated school environment.

2. To identify the sex-wise differences on creativity between the blind subjects in their special and integrated school environment.

3. To explore the inter-sex differences within special school environment on creativity.

4. To measure the inter-sex differences on creativity within the integrated school environment.

Differences on Personality :-

1. To identify the differences on personality between the blind students studying in special environment and the blind students studying in the integrated school environment.

2. To explore the sex-wise differences on personality between the blind subjects in their special and integrated school environment.

3. To measure the inter-sex differences within special school environment on personality.

4. To find out the inter-sex differences with the integrated school environment on personality.

The working hypotheses are given below.

1. There shall not be very significant differences between the blind students studying in the special school environment and the blind students studying in the integrated school environment on the measure of intelligence.

2. Comparisons between the boys in special school and integrated schools as well as the girls in special and integrated school environment will not reveal significant differences on intelligence.

3. There may be some differences on intelligence between the male and female subjects in both the school environments, special and integrated.

4. On the measure of creativity it is expected that the blind students in the integrated school environment will be more creative than their counterparts in the special school environment.

5. The boys and girls in the integrated school environment will exhibit a higher level of creativity than their counterparts in the special school environment.

6. The inter-sex comparisons within the same school environment will also show the superiority of girls over the boys on the measure of creativity.

7. It is expected that on personality characteristics there shall be some differences between the blind studying in the special school environment and those studying in integrated school environments.

8. There may be a few differences of personality characteristics between the boys of the two school environments as well as the girls of the two school environments, i.e., special and integrated.

9. There shall be no significant differences in personality characteristics between the boys and girls if compared in the same school environment.

Method and Procedure :-

The present research work aimed at finding out the differences between visually impaired subjects studying in special and integrated educational settings on cognitive and non-cognitive dimensions of personality, i.e., intelligence, creativity and 14 personality factors of H.S.P.Q.

The data were collected from 134 visually impaired students of special schools and integrated schools. Out of the total sample 99 were students of special schools for the blind and 35 were from integrated educational settings. The special schools were Ahmadi School for the blind, Aligarh, J.P.M. Senior Secondary School for the blind (B.R.A.), New Delhi, Andh Vidyalaya & Andh Maha Vidyalaya, Panch Kunyan Road, New Delhi, Virjanand Kanya Maha Vidyalaya, J.Block, Vikaspuri, New Delhi, Asthvak Training Centre, Shahbad Distt. Rampur and the integrated schools were Government Composite Model

S.S.School, President's estate, New Delhi, Senior Secondary School, Rani Jhansi Road, New Delhi, Commercial Higher Secondary School, Darya Ganj, New Delhi, D.A.V. Inter College, Panch Kunyan Road, New Delhi and Senior Secondary School(Girls) Aligarh. In this study group test of General Mental Ability (Hindi) by Dr. S. Jalota, Verbal Test of Creative Thinking (Revised edition) by Prof. Baqer Mehdi and Indian Adaptation of Cattell and Beloff's H.S.P.Q. (Kapoor and Mehrotra, Form A, 1973) were used for the collection of data on intelligence, creativity and personality respectively.

Scoring on all the three tests of intelligence, creativity and personality was done strictly along the guide-lines provided by the authors in the manuals and keys. The five pairs of groups were formed out of the total population of visually impaired students are given below.

1.	Total special students	Vs	total integrated students
2.	Special school boys	Vs	integrated school boys
3.	Special school girls	Vs	integrated school girls
4.	Special school boys	Vs	special school girls
5.	Integrated school boys	Vs	integrated school girls.

The means and SD_s were computed for finding out the differences between the different pairs of comparison groups on the measure of intelligence, creativity and 14 personality

factors of H.S.P.Q. The 't' value was calculated for knowing the significance of difference between the two means with the help of the following formula.

$$t = \frac{M_1 - M_2}{\sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}}$$

(Mc Nemar,1962, p.102)

The findings of the present research work may be summarized as under.

A. Summary of results on Intelligence :

1. The total special students and total integrated students were similar on intelligence measure.

2. Special school boys and integrated school boys did not show any significant difference on intelligence measure.

3. Integrated school girls were more intelligent than the special school girls.

4. Special school boys and special school girls also did not show any significant difference on the measure of intelligence.

5. Integrated school girls were superior to the integrated school boys on the measure of intelligence.

B. Summary of results on Creativity :-

1. Total integrated students were far more creative than the total special students.

2. The integrated school boys were more creative than the special school boys.

3. The special school girls and integrated school girls did not show any considerable difference on the measure of creativity.

4. The special school boys and special school girls also were almost similar on creativity measure.

5. The integrated school boys and integrated school girls too did not show any considerable difference on creativity measure, however, integrated girls enjoyed an edge over the integrated school boys.

C. Summary of results on 14 factors of Personality :-

1. Total Special Students	Vs	Total Integrated Students
(a) Excitable		(a) Undemonstrative
(b) Adventurous		(b) Shy
(c) Relaxed		(c) Tense

2.	Special School Boys	Vs	Integrated School Boys
(a)	Excitable	(a)	Undemonstrative
(b)	Tough-minded	(b)	Tender-minded
(c)	Sociably group dependent	(c)	Self-sufficient
(d)	Relaxed	(d)	Tense

3.	Special School Girls	Vs	Integrated School Girls
(a)	Emotionally stable	(a)	Affected by feelings
(b)	Adventurous	(b)	Shy
(c)	Obedient	(c)	Assertive

4.	Special School Boys	Vs	Special School Girls
(a)	Warm hearted	(a)	Reserved
(b)	Less intelligent	(b)	More intelligent
(c)	Emotionally stable	(c)	Affected by feelings
(d)	Tough-minded	(d)	Tender-minded
(e)	Zestful	(e)	Circumspect individualism
(f)	Self-assured	(f)	Apprehensive
(g)	Sociably group dependent	(g)	Self-sufficient
(h)	Relaxed	(h)	Tense

5.	Integrated School Boys	Vs	Integrated School Girls
(a)	Emotionally stable	(a)	Affected by feelings
(b)	Zestful	(b)	Circumspect individualism
(c)	Self-assured	(c)	Apprehensive

As mentioned in the previous Chapters the present study may serve as a threshold for further research works in the areas of greater specialization of the blind population. Certain humble suggestions are therefore presented for the interested workers in this field.

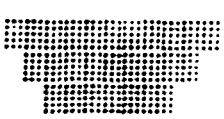
1. The differences on academic achievement in different school subjects between the blind students studying in special school environment and the integrated school environment may quite profitably be explored.

2. The attitudinal differences between the blind students of the two environments, i.e., special and integrated may also be quite interesting for further researches.

3. A more comprehensive study on different cognitive and non-cognitive personality variables may be conducted on the congenitally blind and adventitiously blind subjects.

4. A comparative study of the personality correlates of over-achievers and under-achievers among the blind subjects may also yield certain differential predicto of academic achievements.

5. Studies on remedial measures may also be conducted for the rehabilitation of blind subjects in different fields of life and education.



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APPENDIX - A

MEASURE OF INTELLIGENCE

गोपनीय

मानसिक योग्यता की सामूहिक परीक्षा (72)

(यह पुस्तिका किसी अनाधिकारी के हाथों में न जानी चाहिए)। (आवृत्ति 84)

इस प्रश्न-पुस्तिका के सभी उत्तरों को केवल उत्तर-पत्र पर ही लिखना होगा।
इस परीक्षा पुस्तिका पर कुछ लिखना या चिन्ह न बनाना चाहिए।

प्रारम्भिक आदेश

हम अपनी सामान्य मानसिक योग्यता की परीक्षा करना चाहते हैं।
केवल 20 मिनट का समय है। आप के सामने 100 प्रश्न आयेंगे।

इस परीक्षा के आरम्भ होने से पहले इसमें दिए गए सब प्रकार के प्रश्नों और उनके उत्तर लिखने की विधि को उदाहरण देकर समझाया जायेगा। हमें आशा है कि आपको उचित सफलता मिलेगी। सभी प्रश्न साधारण भाषा में हैं। प्रत्येक प्रश्न के दोनों ओर प्रश्न की क्रमिक संख्या छपी है। प्रायः सभी प्रश्नों के कुछ सम्भव वैकल्पिक उत्तर भी दिये गए हैं। हर एक वैकल्पिक उत्तर की संख्या भी उसके साथ छपी है। आपको हर प्रश्न को समझ कर केवल उसके सही उत्तर को चुनना है, तथा उस उत्तर की संख्या को तत्काल उत्तर पत्र के क्रम अनुसार उचित स्थान पर लिखना है। प्रत्येक प्रश्न का उत्तर संख्या में देना है। अर्थात् अक्षरों में कुछ नहीं लिखना है।

ध्यान रखें प्रत्येक प्रश्न का एक ही ठीक उत्तर है। समय अधिक नहीं है। सब प्रश्नों का सही उत्तर बहुत कम लोग दे सकते हैं। अतएव आपको खूब शीघ्रता से काम करना चाहिए और अधिक से अधिक सही प्रश्नों के उत्तर देने का प्रयास करना चाहिए। अगर कोई प्रश्न आपको अधिक कठिन लगता है, तब उस पर सोच विचार में अधिक समय नष्ट न करें। उसे छोड़ दें और उत्तर पत्र के निश्चित स्थान पर एक कोने में हल्का सा चिन्ह बना दें, और अगले प्रश्न का उत्तर सोच कर तुरन्त उसके उचित स्थान पर लिखें। यदि अन्त में समय हो, तो अपने उत्तरों को दोहरा लीजिए तथा छूटे हुए प्रश्नों का हल सोच कर लिखिए।

× × ×

आरम्भ करने की आज्ञा सुनकर ही आप प्रश्नों को पढ़ने और उत्तर लिखने का कार्य आरम्भ करें, और जितनी शीघ्रता से हो सके साफ उत्तर लिखिए।

एक बात और ध्यान रखिए इस प्रश्न पुस्तिका पर आपको कुछ नहीं लिखना है, और न इस पर किसी प्रकार का चिन्ह ही लगाना है।

केवल उत्तर-पत्र पर यथोचित स्थान से उत्तर की संख्या ही लिखनी है।

अभ्यास के लिए उदाहरण

इस परीक्षा में जिस प्रकार के प्रश्न पूछे गये है, उन के दो-दो उदाहरण नीचे दिये गये है इन में से पहले का उत्तर भी उत्तर पत्र पर छपा है किन्तु दूसरे का उचित उत्तर देने का अभ्यास आप स्वयमेव ही कर सकेंगे।

आइये अब हम इन को पढ़ें और इन को हल करने की विधि समझें— उदाहरण संख्या

↓

1. वृक्ष का अर्थ है, (1) पेड़, (2) जमीन, (3) घास (4) फल (1)
2. लाज्ञा का अर्थ है, (1) कठोर, (2) स्वामी, (3) निर्देश, (4) पालन (2)
3. अच्छाई का उल्टा है, (1) चालाकी (2) बुराई, (3) लड़ाई, (4) नम्रता (3)
4. जीवन का उल्टा है, (1) निराशा, (2) आनन्द, (3) मिट्टी, (4) मृत्यु (4)
5. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें।— 1, 2, 3, 4, 5, 6 .... (5)
6. नीचे दिये संख्या क्रम के अनुसार आगे की संख्या उत्तर-पत्र पर लिखें :— 1, 14, 13, 12, 11, 10 ... (6)
7. इन पाँच शब्दों में से बेमेल की संख्या उत्तर-पत्र पर लिखें— (1) घोड़ा, (2) मुर्गा, (3) हाथी, (4) मोर, (5) लड़का (7)
8. इन पाँच शब्दों में से बेमेल शब्द की संख्या उत्तर-पत्र पर लिखें— (1) निबन्ध; (2) लेखक, (3) उपन्यास, (4) कविता (5) स्तम्भ, (8)
9. छाता एक लाभदायक वस्तु है, इसलिए कि वह (1) कपड़े का बनता है। (2) हमें धूप व वर्षा से बचाता है। (3) वह सब देशों में मिलता है। (9)
10. लोग बिल्लियाँ इसलिए पालते हैं, कि (1) उनकी खाल कोमल होती है। (10) (2) वे कुत्तों से डरती हैं। (3) वे चूहे पकड़ती हैं।
11. कमल : लिखना:: चाकू : (1) आम, (2) काटना, (3) लोहा, (4) खाना (11)
12. खीर : चावल:: हलवा: (1) पूरी, (2) दही, (3) दूध, (4) सूजी (12)
13. हरदेव से सुरजीत लम्बा है, किन्तु हरदेव से जगजीत नाटा है। तो सब से लम्बा कौन ? (1) हरदेव, (2) सुरजीत, (3) जगजीत (13)
14. राम के पीछे गोविन्द खड़ा है, गोविन्द के पीछे चन्दन खड़ा है, और हरि के पीछे चन्दन खड़ा है, सो सब के पीछे कौन खड़ा है ? (1) राम, (2) गोविन्द, (3) चन्दन (4) हरि (14)

—•—

परीक्षा आरम्भ होने से पहले अपनी सभी शंकायें पूछ लीजिये।

जब तक कहा न जाए

कृपया यह

पन्ना मत उलटिये

मानसिक योग्यता की सामूहिक परीक्षा (72)

(उत्तर-पत्र पर क्रमांक के अनुकूल उचित उत्तर की संख्या लिखें)। प्रश्न संख्या ↓

1. प्रकाश का उल्टा है, (1) काला, (2) लैम्प, (3) सूट, (4) अन्धकार (1)
2. कृपा का अर्थ है, (1) धर्म, (2) कर्म, (3) दया, (4) दान (2)
3. पुलिस थाना चौबीस घण्टे खुला रहता है, क्योंकि (1) पुलिस अधिकारियों को 24 घण्टे का वेतन मिलता है। (2) लूट मार और दंगे की घटनाएँ किसी समय हो सकती है। (3) पुलिस वालों को दिन रात की वर्दियाँ मिलती है
4. मोटा का उल्टा है, (1) छोटा, (2) पतला, (3) हल्का, (4) परिश्रमी. (4)
5. घर का अर्थ है, (1) बीवी, (2) परिवार, (3) मकान, (4) खर्च (5)
6. इन पाँच शब्दों में से बे-मेल शब्द का अंक उत्तर-पत्र पर लिखें—
   (1) प्लेट, (2) चम्मचा, (3) प्याला, (4) पतीला, (5) केला. (6)
7. भीतर का उल्टा है, (1) बाहर, (2) खुला, (3) मैदान, (4) तंग. (7)
8. विद्या का अर्थ है, (1) पुस्तक, (2) ज्ञान, (2) रहस्य, (4) विज्ञान. (8)
9. लक्ष्मण की आयु में सीता बड़ी है, परन्तु लक्ष्मण से भरत छोटा है। तब इनमें सबसे बड़ा कौन है ?
   (1) लक्ष्मण, (2) भरत, (3) सीता. (9)
10. साधु का उल्टा है, (1) झगड़ा, (2) दुष्ट, (3) भजन, (4) लड़का (10)
11. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) मोटर, (2) साइकल, (3) ताँगा, (4) तार, (5) रेलगाड़ी. (11)
12. विष का उल्टा है, (1) मीठा, (2) औषध, (3) अमृत, (4) शिव. (12)
13. ऐहमद से अनवर नाटा है, किन्तु अनवर से हमीद नाटा है, तो सबसे नाटा कौन है ?
    (1) ऐहमद, (2) हमीद, (3) अनवर, (13)
14. बलवान का अर्थ है, (1) मोटा, (2) धनवान, (2) प्रधान, (4) शक्तिवान (14)
15. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) चम्पा, (2) चमेली, (3) चाय, (4) गेंदा, (5) गुलाब. (15)
16. अर्जुन से कमला अधिक दौड़ती है, किन्तु चपला से कमला पीछे रह जाती है, तो सबसे अधिक तेज कौन दौड़ता है। (1) चपला, (2) कमला, (3) अर्जुन (16)
17. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) मोटर, (2) रिक्शा, (3) ताँगा, (4) पैदल 5) साइकल (17)
18. "मुख में राम बगल में छुरी" का अभिप्राय है, (1) राम-राम कहने वाले सदा बगल में छुरी रखते हैं। (2) राम कहने से छुरी से रक्षा होती है, (3) अनेक दुष्ट लोग धर्म का पाखण्ड करते है। (18)
19. नीचे दिए संख्या-क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें :— 8, 7, 6, 5, 4, 3. .... (19)
20. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :—
    (1) हृदय, (2) आँख, (3) कान, (4) नाक, (5) जीभ (20)

[प्रश्न 21 के लिये देखिए पृष्ठ 2 (दूसरा)] (शीघ्रता से काम करें)

21. जूते चमड़े के इसलिए बनते हैं, (1) कि वह अधिक चलता है। (2) वह मृत पशु की खाल से बनता है (3) यह सब देशों में पाया जाता है। .... (21)

22. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें -- 6 11 16, 21, 26. .... (22)

23. साँच को आंच नहीं होती, इसलिए कहते है कि (1) सच बोलने वाले को आग नही जलाती। (2) सच्चे की विजय होती है। (3) सच्चे आदमी के घर मे आंच नही मिलती। (23)

24. नीचे दिये संख्या-क्रम के अनुसार आगे की संख्या उत्तर-पत्र पर लिखें— 3 6, 9, 12, 15, 18, ... (24)

25. विदेश जाने के लिए लोग विमान यात्रा पसन्द करते है, इसलिए कि (1) इसमे थोड़ा समय लगता है। (2) यात्रा में खाने-पीने का पूरा प्रबन्ध होता है। (3) वह हवा में धूल से ऊपर उड़ते है। (25)

26. इन पाँच शब्दों में से बे-मेल शब्द का अंक उत्तर-पत्र पर लिखें :— (1) हाकी, (2) फुटबाल, (3) शतरंज, (4) क्रिकेट, (5) टेनिस (26)

27. पापी का मन सदा शंकित रहता है, इसलिए कि (1) उसको नरक का कष्ट भोगना पड़ेगा। (2) शंकित मन वाले पाप करते हैं। (3) पापी की पोल खुलने का डर रहता है। .... (27)

28. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें :— 6, 11, 17, 23, 29, 35, ... (28)

29. एक देश में रेल की बहुत सी लाइनें होनी चाहिए, इसलिए कि (1) इनमें माल और मनुष्यों के आने-जाने में सुविधा होती है। (2) इनसे व्यापार को लाभ होता है। (3) इनके द्वारा देश मे खाद्य पदार्थों का मूल्य कम हो जाता है। (29)

30. हीरा का अर्थ है, (1) मोती, (2) मंहगा, (3) पत्थर, (4) जवाहर (30)

31. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें— 3, 12, 21, 30, 39, 48, ... (31)

32. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें-- (1) कालीदास, (2) तुलसीदास, (3) जयशंकर प्रसाद, (4) बुद्ध, (5) टैगोर (32)

33. नीचे दिये संख्या क्रम के अनुसार की एक संख्या उत्तर-पत्र पर लिखें— 14, 17, 20, 23, 26, 29 .... (33)

34. घोड़ा : टाँग : गाड़ी : (1) बालक, (2) पहिया (3) सड़क, (4) टट्टू .... (34)

35. इन पाँच शब्दों में से बे-मेल शब्द का अंक उत्तर-पत्र पर लिखें— (1) पास, (2) दूर, (3) परे, (4) यहाँ, (5) धीमा (35)

36. लिपिक : अध्यक्ष : सैनिक (1) मजदूर, (2) दिक्टेटा, (3) कप्तान, (4) चालक (36)

37. इन पाँच शब्दों में से बे-मेल शब्द का अंक उत्तर-पत्र पर लिखें— (1) खेलना, (2) सोना, (3) गाना, (4) दौड़ना: (5) नाचना .... (37)

38. तरल : ठोस :: पानी (1) बरफ (2) मछली, (3) तैरना, (4) स्नान (38)

39. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें—1, 2, 2, 4, 8, 16, 32 .... (39)

40. जनवरी : फरवरी में जुलाई : (1) मार्च (2) अगस्त (3) रविवार (4) जून (40)

[प्रश्न 41 के लिए पन्ना उलटिये, और देखिए पृष्ठ 3 (तीसरा)]

(शीघ्रता से कार्य करें।)

(उत्तर-पत्र पर यथा-स्थान उचित-उत्तर की संख्या लिखें।)

प्रश्न संख्या ↓

41. नीचे दिये संख्या क्रम के अनुसार, आगे की एक संख्या उत्तर-पत्र पर लिखें : ... 21 19, 17 15, 13, 11, (41)

42. बहन : भाई : मासी : (1) चाचा, (3) भुआ, (3) दादा, (4) मामा .... (42)

43. गोवर्द्धन की मोटाई चन्द्रन से कम है, और चन्द्रन से अधिक मोटा गिरधारी है, तो सब से दुबला कौन है ? (1) चन्द्रन (2) गिरधारी, (3) गोवर्द्धन (43)

44. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें : 18, 16, 14, 12, 10, 8 .... (44)

45. हँसना : रोना: : बचपन : (1) खेलकूद (2) बुढ़ापा (3) मारपीट (4) हार (45)

46. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :— (1) गाय, (2) भैंस, (3) घोड़ा, (4) भेड़, (5) बकरी .... (46)

47. क्रूर का उलटा है, (1) सज्जन, (2) भला, (3) दयालू, (4) कठोर (47)

48. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :— (1) कूदना, (2) फादना, (3) भागना, (4) खड़े रहना, (5) चलना, (48)

49. पद्मा से रणजीत अच्छी सिलाई करता है, किन्तु पुष्पा से पद्मा अच्छा कार्य करती है तब सिलाई में सब से अच्छा कौन है ? (1) रणजीत, (2) पद्मा, (3) पुष्पा (49)

50. इन पाँच शब्दों में से शब्द का अंक उत्तर पत्र पर लिखें :— (1) मिट्टी, (2) लकड़ी, (3) शिक्षा, (4) कंकर, (5) पत्थर (50)

51. उद्यम का उलटा है, (1) वियोग, (2) डरपोक, (3) विश्राम, (4) आलस्य (51)

52. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :—78, 67, 56, 45, 34, 23 ... (52)

53. फल : सेव : पुष्प : (1) अनार (2) बादाम (3) गुलाब, (4) जामुन (53)

54. मोहन से नाटा राम है और किशन से नाटा राम है। तब सबसे कम लम्बा कौन है ? (1) मोहन, (2) किशन, (3) राम (54)

55. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें :— 5, 6, 7, 8, 11,... 15,.... 20 .... (55)

56. "झूठ के पाँव नहीं होते" यह इस कारण कहा जाता है कि (1) लंगड़े मनुष्य बहुत झूठ बोलते हैं। (2) झूठे मनुष्य की पोल शीघ्र खुल जाया करती है। (3) झूठ बोलने वाले बहुत बार चलते समय ठोकर खाते हैं : (56)

57. नाव : माझी : : मोटर : (1) स्वामी, (2. यात्री, (3) नगर (4) चालक (57)

58. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर-पत्र पर लिखें :— (2) खाट, (2) कुर्सी, (3) प्लेट, (4; सोफा, (5) पीढ़ा (58)

59. मकान : ईंट : : सेना : (1) सिपाही, (2) पत्थर, (3) हथियार, (4) युद्ध (59)

60. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :— 5, 6, 9, 10, 13, 14, (60)

[प्रश्न 61 के लिये देखिए पृष्ठ 4 (चौथा)]

(शीघ्रता से कार्य करें)

(उत्तर पत्र पर यथा स्थान-उचित स्तर की संख्या लिखें) प्रश्न संख्या ↓

51. सम्पादक : पत्रिका : : व्यापारी : (1) बाजार, (2 विज्ञापन, (3) दुकान, (4) समाचार (61)

52. आश्चर्य का अर्थ है, (1) निराला, (2) विसमय, (3) घबराहट, (4) अनुभव (62)

53. चन्द्रमा : : पृथ्वी : पृथ्वी, (1) सागर, (2) मंगलतारा, (3) सूर्य, (4) मछलियां (63)

54. इन पाँच शब्दों में से बेमेल शब्द की संख्या उत्तर पत्र पर लिखें :--
(1) गोभी, (2) गाजर, (3) ककड़ी, (4) मूली, (5) धनिया (64)

55. सोना का अर्थ है, (1) कनक, (2) खाद, (3) धन, (4) माला (65)

56. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :— 9, 12, 14, 17, 19, 22 (66)

67. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पत्र पर लिखें :—
(1) भूखा, (2) मरा, (3) प्यासा, (4) थका, (6) हारा (67)

58. सदाशिव से मुरारी लम्बा है। किन्तु मुरारी से बीरेन्द्र नाटा है और त्रिलोकी से मुरारी नाटा है। तो सब से लम्बा कौन है ? (1) सदाशिव, (2) मुरारी, (3) बीरेन्द्र, (4) त्रिलोकी (68)

69. वृक्ष : लता : : फल : (1) फूल, (2) चम्पा, (3) मोतिया, (4) मालसिरी (69)

70. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :— 8, 9, 12, 13, 16, 17 .... (70)

71. नेता : जनता : : अधिकारी : (1 चुनाव, (2) भाषण, (3) कर्मचारी, (4) निर्णय (71)

72. आरेखन कला में राम से गार्गी चतुर है। किन्तु उसकी अपेक्षा सीता चतुर है। अतः सबसे चतुर कौन है ? (1) गार्गी, (2) सीता, (3) राम, (72)

73. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पत्र पर लिखें :—
(1) घोड़ा, (2) ऊँट, (3) कंगारू, (4) गधा, (5) भैंसा (73)

74. चित्र : खड़ा : : सिनेमा : (1) खाता, (2) चलता, (3) हँसता, (4) रोता (74)

75. नीचे दिये संख्या क्रम के अनुसार आगे की संख्या एक उत्तर पत्र पर लिखें :— 29, 28, 26, 23, 19, 14 .... (75)

76. मेरे विचार में यदु से सीता चतुर है किन्तु कमला से रमा निःसन्देह चतुर है। और सीता से रमा मन्द है। तो सबसे चतुर कौन है ? (1) यदु, (2) कमला, (3) रमा, (4) सीता (76)

77. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :— 7, 8, 10, 13, 17, 22 .... (77)

78. सभ्यता का अर्थ है, (1) वस्त्र, (2) कला, (3) ज्ञान, (4) संस्कृति (78)

79. "जिसकी लाठी उसकी भैंस" कहने का अभिप्राय: है कि (1) भैंस वाले के पास लाठी आवश्यक होती है। (2) अधिक बलवान की बात सबको माननी पड़ती है। (3) लाठी देखकर भैंस अधिक दूध देती है। (79)

80. जूलियट : रोमियो : : संयोगिता : (1) स्वयंवर, (2) जयचन्द, (3) पृथ्वीराज, (4) अकबर (80)

[प्रश्न 81] के लिए पन्ना उलटिए, देखिए पृष्ठ 5 (पाँचवां)] (शीघ्रता से कार्य करें)

(उत्तर पत्र पर यथा-स्थान उचित उत्तर की संख्या लिखें।) प्रश्न संख्या ↓

81. अनेक वर्षों तक हवाई जहाज सफल न हुए, (1) वे बहुत भारी बनाये जाते थे। (2) उनके कल पुर्जे बहुत जटिल होते थे। (3) एक उत्तम इंजन नहीं बन पाया था। (81)

82. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखें:— 4, .. 6, · · 9, ·· 11, .. . 14, .. 16, ... (82)

83. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पत्र पर लिखें। (1) चिड़िया, (2) तोता, (3) बुलबुल, (4) कबूतर, (5) उल्लू (83)

84. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :— 8, 9, 11, 12, 14, 15 .... (84)

85. इन पाँच शब्दों में से बेमेल शब्द का अंक उत्तर पर लिखें :— (1) गया, (2) पुरी, (3) प्रयाग, (4) द्वारिका, (5) दिल्ली (85)

86. दैनिक : मासिक : : पत्र : (1) कहानियाँ, (2) समाचार, (3) पत्रिका, (4) संवाद, (86)

87. ऋण का उल्टा है, (1) धन, (2) बचत, (3) बनिया, (4) व्यापार, (87)

88. कोट : पैन्ट : : कुरता : (1) समाचार, (2) टोपी, (3) पाजामा (4) पगड़ी, (88)

89. विस्तृत का उल्टा है, (1) विशाल, (2) कमरा, (3) पतला, (4) संकुचित, (89)

90. पेनसिल : चाक : : कापी : (1) पुस्तक, (2) बोर्ड, (3) ताक, लेख (90)

91. पाँच शब्दों से बेमेल शब्दों का अंक उत्तर पत्र पर लिखें :— (1) पहरा, (2) प्रभात, (3) घंटा, (4) मिनट, (5) क्षण (91)

92. नीचे दिये संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :— 2, 3, 5, 6, 8, 9, ... (92)

93. श्वेत : हिम : : श्याम : (1) दिन, (2) चिड़िया, (3) कौवा, (4) रात, (93)

94. नीचे दिए संख्या क्रम के अनुसार आगे की एक संख्या उत्तर पत्र पर लिखें :— 27, 36, 24, 21, 17, 12 .... (94)

95. विहंग का अर्थ है, (1) मोर, (2) पक्षी, (3) भद्दा, (4) निडर (95)

96. रमा की बुद्धि देवकी से प्रखर है, पर सीता की बुद्धि सावित्री से हीन है, किन्तु देवकी की बुद्धि सावित्री से उत्तम है, तो सबसे बुद्धिमान कौन है ? (1) देवकी, (2) सीता, (3) रमा, (4) सावित्री (96)

97. इन पाँच शब्दों मे से बेमेल शब्द का अंक उत्तर पत्र पर लिखें : (1) हिमालय, (2) केरल, (3) मेघालय, (4) भोपाल (5) हरियाणा (97)

98. नाटा का उल्टा है, (1) भारी, (2) लम्बा, (3) तगड़ा, (4) कठोर (98)

99. गलत का अर्थ है, (1) बुरा, (2) विष, (3) कड़वा, (4) सरल (99)

100. मकड़ी : मक्खी :: बिल्ली : (1) कुत्ता, (2) पिल्ला, (3) दूध, (4) चूहा (100)

(यदि समय बाकी है तो अपने उत्तरों को दोहराइए)

	उदाहरण
1	1
2	
3	2
4	
5	7
6	
7	5
8	
9	2
10	
11	2
12	
13	2
14	

योग्यता Ability	अंक Score	श्रेणी Grade
V अ		
N अ		
R अ		

पृष्ठ 1		पृष्ठ 2		पृष्ठ 3		पृष्ठ 4		पृष्ठ 5	
1		21		41		61		81	
2		22		42		62		82	
3		23		43		63		83	
4		24		44		64		84	
5		25		45		65		85	
6		26		46		66		86	
7		27		47		67		87	
8		28		48		68		88	
9		29		49		69		89	
10		30		50		70		90	
11		31		51		71		91	
12		32		52		72		92	
13		33		53		73		93	
14		34		54		74		94	
15		35		55		75		95	
16		36		56		76		96	
17		37		57		77		97	
18		38		58		78		98	
19		39		59		79		99	
20		40		60		80		100	
जोड़		जोड़		जोड़		जोड़		जोड़	

1 Poor खराब

2 Very Low बहुत कम

3 Dull कम

4 Low कम

5 Average औसत

6 Bright ऊंचा

7 Superior उत्तम

8 V Super बहुत उत्तम

9 Excellent उत्कृष्ट

APPENDIX - B

MEASURE OF CREATIVITY

गोपनीय

T. M. No. 458715

T C W

डा. बाकर मेहदी
प्रोफेसर ऑफ ऐजुकेशन
एन. सी. ई. आर. टी,
नई दिल्ली–110016

नाम— आयु—

कक्षा— विद्यालय—

पिता/अभिभावक का नाम— व्यवसाय—

घर का पता— दिनांक—

निर्देश

जीवन में नवीनता, मौलिकता एवं रचनात्मक योग्यता का बड़ा महत्व है। जीवन की प्रत्येक नई खोज मनुष्य के नये ढंग से सोचने की योग्यता का परिणाम है। संसार की बहुत सी ऐसी वस्तुयें हैं जिन्हें नये-नये विचारों द्वारा अनोखी तथा उपयोगी बनाया जा सकता है। ऐसी योग्यता रखने वाले व्यक्तियों ने ही नई-नई खोजें तथा आविष्कार किये हैं। आगे के पृष्ठों पर कुछ ऐसी समस्यायें दी गई हैं जिन्हें यदि आप विचारात्मक एवं सृजनात्मक ढंग से हल करने का प्रयत्न करेंगे तो आप बहुत से नवीन तथा रोचक उत्तर देने में सफल हो सकेंगे। आपको इन कार्यों के करने में बहुत आनन्द आयेगा।

1 ये कार्य दिन-प्रतिदिन की समस्याओं से सम्बन्धित हैं; इनका कोई सही या गलत उत्तर नहीं है। देखना यह है कि आप कहाँ तक ऐसी नई एवं अनोखी बातें सोचते हैं जो आपके विचार में आपके साथी नहीं सोच सकते। वास्तव में विचित्र एवं नवीन उत्तर देने से ही यह पता लग सकेगा कि आप में वस्तुओं को नये ढंग से सोचने की कितनी योग्यता है; अतः जितने भी अधिक नये एवं रोचक विचार आप लिखते जाइये चाहे वे असम्भव ही क्यों न मालूम होते हों।

2. इस पत्रिका में आपको चार प्रकार के कार्य करने के लिये दिये गये हैं। सुविधा के लिये प्रत्येक कार्य का अलग-अलग समय निश्चित है; जहाँ तक सम्भव हो शीघ्रता से उत्तर दीजिये। यदि आप किसी कार्य को निश्चित समय से पहले पूरा कर लेते हैं तो भी जब तक आपसे अगले कार्य के लिये न कहा जाये, आगे न बढ़ें; बल्कि उसी कार्य के बारे में शांतिपूर्वक सोचते रहें और जो भी नया विचार आपके मन में आये, उसे भी लिख दें। अन्त में पाँच मिनट का समय और दिया जायेगा। यदि आपके मन में किसी भी प्रश्न के किसी भाग के बारे में कोई नवीन विचार आया है जिसे आप पहले नहीं लिख पाये थे, तो उसे इस समय में लिख सकते हैं।

3. प्रत्येक कार्य के हर भाग का उत्तर अवश्य दीजिये; जब आपसे कार्य आरंभ करने को कहा जाये तो तुरंत शुरू कर दीजिये।

यदि आप को कोई बात पूछनी हो तो इस समय पूछ लीजिये। यदि इस समय कोई कठिनाई नहीं है और बाद में कोई कठिनाई आये तो शान्तिपूर्वक अपने स्थान से हाथ उठायें ताकि आपकी कठिनाई दूर की जा सके।

Ested : 1971 Phone : 63551

National
PSYCHOLOGICAL CORPORATION
4/230 KACHERI GHAT, AGRA - 282 004 (INDIA)

कार्य : I यदि ऐसा हो जाये तो.....

निर्देश

1. इस कार्य में नीचे तीन असम्भव बातें दी गई हैं जो कि कभी सत्य नहीं हो सकतीं। आप केवल यह मान लें कि ऐसा हो गया है। तब आप सोचें कि ऐसा हो जाने पर क्या परिणाम हो सकते हैं ?
2. प्रश्नों का उत्तर देते समय अपने ध्यान और सोचने की शक्ति को पूरी तरह प्रयोग करने का प्रयत्न कीजिये और 15 मिनट में आप जितने उत्तर दे सकते हैं, दीजिये। ऐसे उत्तर देने का प्रयत्न कीजिये जो आपके विचार में आपके किसी साथी ने न सोचे हों।
3. उत्तर छोटे-छोटे वाक्यों में देने का प्रयत्न कीजिये ताकि दिये हुये समय में आप अधिक से अधिक लिख सकें।
4. याद रखिये आपको 15 मिनट में इस कार्य की तीनों समस्याओं के विषय में लिखना है जब पहले प्रश्न के विषय में कोई अन्तर समझ में न आये तो आप तुरन्त दूसरे प्रश्न को हल करना शुरु कर दीजिये। अगर बीच में या बाद में पहले प्रश्न के विषय में कोई नया उत्तर ध्यान में आये तो उसे भी पहले उत्तरों के साथ लिख दीजिये। आपकी सुविधा के लिये हर 5 मिनट समाप्त होने पर आपको बता दिया जायेगा।
5. जब आपसे काम आरम्भ करने को कहा जाये तो तुरन्त शुरु कर दीजिये।

नीचे एक उदाहरण दिया जा रहा है जिससे स्पष्ट हो जायेगा कि आपको क्या करना है :-

प्रश्न—यदि पशु-पक्षी भी मनुष्य के समान बोलने लगें तो क्या होगा ?

उत्तर—(1) यह संसार एक विभिन्न प्रकार का संसार दिखायी देगा।
(2) पशुओं के राज्य में बहुत से नेता उत्पन्न होंगे।
(3) सम्भव है कि एक गधा हमारा नेता हो जाये।
(4) यह भी सम्भव है कि वह समारा प्रधान-मन्त्री बन जाये।
(5) मनुष्य अपने पशु-मित्रों को अपना राजदार (विश्वस्त) बना ले।
और (6) पशु भी अपने भेद अपने मनुष्य-मित्रों से कह सकेंगे; आदि।

समस्यायें :—

1. यदि मनुष्य पक्षियों की भाँति उड़ने लगे तो क्या होगा ?

2. यदि आपके विद्यालय में पढ़िये लग जायें तो क्या होगा ?

3. यदि मनुष्य को खाने की आवश्यकता न रहे तो क्या होगा ?

कार्य : 2 वस्तुओं के नये-नये प्रयोग

निर्देश

1. इस कार्य में तीन वस्तुओं के नाम दिये गये हैं जिनको कई नये और विभिन्न तरीकों से प्रयोग किया जा सकता है। आपको इनमें से प्रत्येक के नये-नये, विचित्र तथा रोचक प्रयोग अधिक संख्या में लिखने हैं। प्रयोग साधारण हों या असाधारण आप सबको लिखिये। यदि आप नये-नये और असाधारण प्रयोग जिन्हें आपके साथी आसानी से नहीं सोच सकते, लिखेंगे तो उससे यह मालूम हो सकेगा कि आप में वस्तुओं को नये ढंग से सोचने की कितनी योग्यता है।
2. प्रत्येक प्रश्न का उत्तर देना अनिवार्य है।
3. तीनों वस्तुओं के बारे में लिखने के लिए आपको 12 मिनट का समय दिया जायेगा। जब आप एक वस्तु के प्रयोग लिख चुकें तो तुरन्त दूसरी वस्तु के प्रयोग लिखना आरम्भ कर दीजिये। बीच में या बाद में यदि कोई अन्य नया प्रयोग पहली वस्तु के बारे में याद आ जाये तो उसे भी लिख दीजिये। उत्तर छोटे-छोटे वाक्यों में लिखिये ताकि आप अधिक से प्रयोग लिख सकें। हर चार मिनट समाप्त होने पर आपको बता दिया जायेगा।
4. जब आपसे कार्य आरम्भ करने के लिये कहा जाये तो तुरन्त आरम्भ कर दीजिये।

नीचे दिये उदाहरण से आपकी समझ में आ जायेगा कि आपको क्या करना है :—

उदाहरण—'समाचार-पत्र

प्रयोग—(1) समाचार पढ़ने के लिये
(2) धूप से बचने के लिये
(3) बच्चों के खेलने की चीजें बनाने के लिये
(4) लपेटने के लिये
(5) रद्दी कागज जमा करने के लिये
(6) गन्दे स्थान को ढकने के लिये; आदि।

समस्यायें :—

1. पत्थर का टुकड़ा

2. लकड़ी की एक छड़ी

3. पानी

कार्य : 3 नये सम्बन्ध पता लगाना

निर्देश

नीचे कुछ शब्दों के जोड़े दिये गये हैं जो आपस में कई प्रकार से सम्बन्धित हो सकते है। आपको यह सोचना है कि वे कितने प्रकार से आपस में सम्बन्ध रखते हैं। वैसे तो जोड़े के दोनों शब्द अलग-अलग वस्तुएं होती है, लेकिन यदि ध्यान से देखा जाये तो नये-नये प्रकार के सम्बन्ध समझ में आ सकते हैं। जितने भी सम्बन्ध आप सोच सकें उन्हें दिये हुये स्थान पर छोटे-छोटे वाक्यों में लिख दीजिये। देखना यह है कि आप कितने अधिक और नवीन सम्बन्ध सोचकर लिख सकते हैं।

आपको इस कार्य के लिए 15 मिनट का समय दिया जायेगा। आपको वस्तुओं के सभी जोड़ों के बारे में विचार लिखने हैं। अतः जहाँ तक सम्भव हो उत्तर शीघ्रता से दीजिये। हर पाँच मिनट समाप्त होने पर आपको बता दिया जाएगा। जब आपसे कार्य आरम्भ करने को कहा जाए तो तुरन्त शुरू कर दीजिए।

नीचे दिए उदाहरण में यह बात स्पष्ट हो जावेगी कि आपको क्या करना है :—

उदाहरण—आदमी और जानवर

उत्तर— (1) आदमी और जानवर दोनों में जीवन होता है।
(2) दोनों को भोजन-पानी की आवश्यकता होती है।
(3) दोनों को रोग हो सकते हैं।
(4) दोनों को शत्रु का डर रहता है।
(5) दोनों को सर्दी-गर्मी का अनुभव होता है।
(6) दोनों अपने रहने की व्यवस्था करते हैं; आदि।

समस्यायें :—

1. पेड़ और मकान

.2 कुर्सी और सीढ़ी (नसैनी)

3. हवा और पानी

कार्य : 4 वस्तुओं को मनोरंजक तथा विचित्र बनाना

निर्देश

आपने घोड़े का खिलौना तो देखा ही होगा, अन्य जानवरों के भी खिलौने होते हैं जिनसे बच्चे बड़ी प्रसन्नता से खेलते हैं। साधारणतया ये खिलौने छोटे आकार के होते हैं ताकि बच्चे उनसे आसानी से खेल सकें। आप घोड़े के एक सादे खिलौने को ध्यान में रखिये और फिर नीचे आप उन अनोखे तथा मनोरंजक तरीकों को लिखिए जिनके द्वारा आप इस खिलौने में ऐसे परिवर्तन ला सकें जिनसे बच्चों को इन खिलौनों से खेलने में अधिक आनन्द आने लगे। इस बात की परवाह मत कीजिए कि इस प्रकार के परिवर्तन पर क्या लागत आएगी। आपको केवल यह सोचना है कि खिलौने को बच्चों के लिए किस तरह अधिक से अधिक मनोरंजक तथा विचित्र बनाया जा सकता है।

जब आपसे कार्य आरम्भ करने को कहा जाए तो तुरन्त कार्य आरम्भ कर दीजिए। आपको इस कार्य के लिए 6 मिनट का समय दिया जाएगा।

SCORING SHEET

TCW

ACTIVITY I

	Fluency	Flexibility	Originality
Item 1.	.....	.....	.....
Item 2.	.....	.....	.....
Item 3.	.....	.....	.....
Total		.....	.....

ACTIVITY II

	Fluency	Flexibility	Originality
Item 1.	.....	.....	.....
Item 2.	.....	.....	.....
Item 3.	.....	.....	.....
Total			.....

ACTIVITY III

	Fluency	Flexibility	Originality
Item 1.	.....	.....	.....
Item 2.	.....	.....	.....
Item 3.	.....	.....	.....
Total			.....

ACTIVITY IV

	Fluency	Flexibility	Originality
Item 1.	.....	.....	.....

SCORE SUMMARY

	Fluency	Flexibility	Originality
Activity I	.....	.....	.....
Activity II		.....	.....
Activity III	.....	.....	.....
Activity IV	.....	.....	.....
Grand Total		.....	.....

See back page for further instructions regarding originality scoring.

ORIGINALITY SCORING FOR RESPONSES NOT MENTIONED IN THE RESPONSE LIST

For any novel response not mentioned in the response list given in the manual, first of all briefly note it down in the space provided below giving the number of the activity and the item to which it belongs. Then, after you have scored all the test scripts, give it a score according to the scheme given in the maunal and note the score in the appropriate column in the Scoring Sheet. In all probability, there will be very few such responses.

Activity	Item	Response	Originality Score

APPENDIX - C

MEASURE OF PERSONALITY

(Revised

Hindi Version of IPAT'S "Jr.-Sr. H. S. P. Q." 1967

Prepared by :
K. K. Mehrotra

(Original Test Authors are Dr. R. B. Cattell and Halla Beloff)

निर्देश

इस प्रश्नावली से तुम्हारे व्यक्तित्व के बारे मे पता लगेगा। इसमें तुम्हारी पसन्द एवं रुचियों के विषय में प्रश्न दिये गये है। तुमको क्या करना है यह दो उदाहरणों द्वारा स्पष्ट कर दिया जायेगा। प्रश्न तुमको इस पुस्तिका मे पढ़ने हैं और अपने उत्तर तुमको साथ म दिये गये उत्तर-पत्र पर लिखने है। ध्यान रहे न तो तुम्हें इस पुस्तिका पर कुछ लिखना है न किसी प्रकार का कोई निशान लगाना है।

उदाहरण :—

१. खाली समय में तुम क्या करना चाहोगे ?
(क) पुस्तकालय में अध्ययन करना, (ख) अनिश्चित, (ग) सैर-सपाटा करना।

२. किसी से झगड़ा होने पर क्या तुम आसानी से दुबारा मित्रता कर लेते हो ?
(क) हां, (ख) अनिश्चित, (ग) नहीं।

इन उदाहरणों से स्पष्ट है कि कोई भी उत्तर 'सही' या 'गलत' नहीं है। हरएक व्यक्ति की रुचियां अलग-अलग होती है, इसलिये तुम अपने बारे में जैसा सोचते या समझते हो केवल वही उत्तर सही और ठीक है। प्रत्येक प्रश्न के तीन उत्तरों मे स एक उत्तर तुमको ऐसा मिलेगा जो औरों की अपेक्षा तुमको कुछ अधिक उपयुक्त लगेगा। अत: प्रत्येक प्रश्न के दिये हुये तीन उत्तरो मे स किसी एक पर उत्तर-पत्र में निशान अवश्य लगाओ।

जिस प्रकार के प्रश्न ऊपर दिये गये हैं वैसे ही बहुत से प्रश्न इस पुस्तिका के भीतर तुमको मिलेंगे। जब तुमसे पन्ना पलटने को कहा जाये तो पहले प्रश्न से शुरू करो और अन्त तक करते चले जाओ। प्रश्नों का उत्तर देते समय नीचे लिखी बातों पर ध्यान देना आवश्यक है :—

(१) प्रश्नों के उत्तर सच्चाई से तथा निस्संकोच भाव से दो, क्योंकि गलत उत्तर देने से तुम्हारा कोई लाभ नहीं है। तुम जैसे हो या जैसा करते हो वैसा ही उत्तर दो। यह मत सोचो कि कैसा उत्तर देना उचित है।

(२) यद्यपि इस प्रश्नावली के लिये कोई समय निश्चित नहीं है, फिर भी तुम प्रश्नों का उत्तर शीघ्रता से दो। तुम अपना निर्णय सोच-विचार कर देने की अपेक्षा तुरन्त मन में आये हुए विचारों के आधार पर दो। कुछ प्रश्न एक दूसरे से मिलते-जुलते मालूम पड़ते हैं परन्तु कोई भी दो प्रश्न बिलकुल एक से नहीं हैं। अत: तुम्हारे उत्तर भी अलग-अलग हो सकते है।

(३) बीच वाला उत्तर अर्थात "अनिश्चित" (या 'ख') केवल तभी प्रयोग में लाओ जबकि पहले या बाद वाले उत्तर का चुनाव बिलकुल असम्भव हो। अत: अधिकतर हां' (या 'क') अथवा 'नहीं' (या 'ग') के उत्तर ही प्रयोग मे लाना चाहिये।

(४) किसी भी प्रश्न को मत छोड़ो। अगर कोई प्रश्न पूर्णत: तुम पर लागू नही हो या तुम्हारी रुचि के अनुकूल न हो केवल तभी तुम 'अनिश्चित' (या 'ख') के सामने निशान लगाओ।

अगर तुम्हें कुछ पूछना है तो अभी पूछ सकते हो, और यदि बाद में कोई कठिनाई समझनी हो तो स्वयं आकर पूछ सकते हो। किन्तु बगल में बैठे साथी को परेशान मत करो।

संकेत मिलने पर पन्ना उलटो और प्रश्नों का उत्तर देना आरम्भ कर दो।

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१. जिन निर्देशों को अभी तुमने पढ़ा है, क्या तुम उन्हें ठीक से समझ गये हो ?
(क) हां, (ख) अनिश्चित, (ग) नहीं।

२. यदि अध्यापक अथवा अन्य लोग तुमसे अपनी व्यक्तिगत समस्या के रूप में पूछ-ताछ करते हैं तो क्या तुम :
(क) अपनी समस्या को व्यक्त नहीं करते, (ख) दोनों के बीच में, (ग) अपनी समस्या व्यक्त करके शान्ति पाते हो ?

३. गोपाल रमेश से लम्बा है। सुरेश इतना लम्बा नहीं है जितना गोपाल। सबसे लम्बा कौन है ?
(क) गोपाल, (ख) सुरेश (ग) रमेश।

४. किसी कार्य का निश्चय करने के बाद, क्या तुम प्राय:
(क) कार्य आरम्भ करने में कठिनाई अनुभव करते हो, (ख) दोनों के बीच में, (ग) एकदम बैठकर शुरू कर देते हो ?

५. किसी कार्य की योजना बनाते समय क्या तुम्हें उसकी सफलता में आशा और विश्वास रहता है ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

६. जब लोग तुमको कठिन या नीरस बात समझाते हैं तो क्या :
(क) तुम्हारा मन अन्य बातों में बहक जाता है, (ख) दोनों के बीच में, (ग) प्रतीक्षा करते हो जब तक बात समाप्त न हो ?

७. क्या तुम्हारे विचार में स्कूल छोड़ने पर तुम्हारी कक्षा के काफी विद्यार्थी तुम से जीवन में आगे निकल जायेंगे ?
(क) हां, (ख) शायद, (ग) नहीं।

८. क्या आनन्ददायक घटनाओं के विषय में तुम अपने साथियों से खूब बातें करते हो ?
(क) हां, बहुत (ख) कभी-कभी, (ग) कभी नहीं।

९. क्या तुम ऐसे सहपाठियों को पसन्द करते हो जो :
(क) मुख्यत: शान्त और मननशील होते हैं, (ख) दोनों के बीच में, (ग) फुर्तीले, मजाकिये और हाजिर जवाब होते हैं ?

१०. अपना आधा घन्टा तुम किस प्रकार व्यतीत करोगे ?
(क) रोचक बातों की पुस्तक पढ़कर, (ख) अनिश्चित, (ग) हास्यप्रद पुस्तक पढ़कर।

११. रात को अन्धेरे में सोते समय क्या तुमको कभी-कभी ऐसा लगता है कि जैसे तुम्हें किसी का चेहरा दिखा हो या कोई चल रहा हो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

१२. खतरा होते हुए भी क्या तुम शत्रु से संघर्ष करना पसन्द करोगे ?
(क) हां, (ख) शायद, (ग) नहीं।

१३. किस परिस्थिति में तुम अधिक परेशानी अनुभव करते हो ?
(क) समूह में अत्यधिक क्रियाशील हो जाने पर, (ख) अनिश्चित, (ग) समूह की क्रियाओं में भाग न लेने में।

१४. क्या तुमको नये मित्र बनाने में आसानी होती है ?
(क) हां, (ख) अनिश्चित, (ग) नहीं।

१५. क्या तुम्हें खेल के मैदान में लोगों को देखने की अपेक्षा अपनी टीम का उत्साह बढ़ाने के लिए शोर मचाने में अधिक आनन्द आता है ?
(क) हां, (ख) शायद, (ग) नहीं।

१६. क्या तुम अपने दोस्तों के साथ घूमते समय अधिकतर चुप रहते हो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

१७. कक्षा में पूछे गये प्रश्न का उत्तर देने की तीव्र इच्छा होने पर क्या तुम कभी-कभी अंगुलियां चटकाने लगते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

१८. घर के काम के लिये जितना समय लगाने को कहा जाता है क्या उससे अधिक समय लगाने में तुम विश्वास करते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

१९. जब कोई तुम्हारे कार्य में बाधा डालता है तो क्या कभी इतना गुस्सा आता है कि उस पर बैठो ?
(क) हां, (ख) शायद, (ग) नहीं।

२०. जब तुम कक्षा मे किसी विषय पर चर्चा करते हो तो क्या तुम्हारे साथी उसमें तुम्हारे समान उत्साह नहीं दिखा पाते ?
(क) हां, (ख) शायद, (ग) नहीं।

२१. जब तुम्हारे सहपाठी तुमसे बिना पूछे तुम्हारी चीजों से खेलने लगते है, तो क्या तुम :
(क) उसे हमेशा ठीक समझते हो, (ख) दोनो के बीच में, (ग) उन्हें झिड़क कर भगा देते हो ?

२२. "अनुत्तीर्ण" का उल्टा होता है :
(क) रहना, (ख) सफल होना, (ग) प्रयास करना।

२३. जब शान्त रहना उचित हो तो क्या उत्तेजनापूर्ण घटनाओं के रहते हुए भी तुम शान्त रह पाते हो ?
(क) हां, (ख) कभी-कभी, (ग) नही।

२४. यदि तुम पर कोई क्रोध करता है तथा चिल्लाता है तो क्या तुम :
(क) शान्त और मुस्कराते रहते हो, (ख) दोनों के बीच में, (ग) क्रोध से पागल हो जाते हो और तुम भी चिल्लाने लगते हो ?

२५. परीक्षा से पहले क्या तुम :
(क) घबराहट महसूस करते हो और इस बात से चिन्तित हो जाते हो कि जाने कौन से प्रश्न पूछे जायें, (ख) दोनों के बीच में, (ग) बिलकुल शान्त रहते हो ?

२६. जब कोई तुम्हें उपदेश देता है (अध्यापक या गुरु की तरह) कि तुम्हें क्या करना चाहिये तो क्या तुम्हें उस पर हंसने की इच्छा होती है ?
(क) हां, (ख) शायद, (ग) नही।

२७. जब तुम शहर से कही दूर निकल जाते हो तो क्या तुम :
(क) सहपाठियों के साथ मिलकर गाना पसन्द करते हो, (ख) दोनों के बीच में, (ग) शान्त प्राकृतिक दृश्यों का आनन्द लेते हो ?

२८. स्कूल में किसी नये अध्यापक या छात्र के आने पर क्या तुम उनसे स्वयं जाकर परिचय करते हो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

२९. क्या तुम स्कूल में अच्छे कामों को करने के लिये अपने माता-पिता से सलाह लेते हो ?
(क) प्राय: (ख) कभी-कभी, (ग) शायद ही कभी।

३०. क्या तुम्हारा जीवन अपने परिवार के लोगों एवं मित्रों की अपेक्षा अधिक सुखमय रहा है ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

३१. दिन में जो बातें हो जाती हैं क्या उनको याद करके तुम कभी-कभी बहुत चिन्तित हो जाते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

३२. क्या तुम सन्ध्या के समय एक झील के किनारे :
(क) नावों की तीव्र गति में दौड़ देखना पसन्द करोगे, (ख) अनिश्चित, (ग) मित्र के साथ घूमना पसन्द करोगे ?

३३. जब लोग मजाक कर रहे होते हैं तो क्या तुम :
(क) सोचते हो कि यह सब बचपना है और गलत है, (ख) अनिश्चित, (ग) उनके साथ में मजाक का आनन्द लेते हो ?

३४. लोगों के तुमको गन्दा, लापरवाह या चचल कहने पर क्या तुम कभी-कभी परेशान हो गये हो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

३५. क्या तुम गम्भीर बातें करने वालों की अपेक्षा उन लोगों को अधिक पसन्द करते हो जो मन बहलाने वाली (विनोदी) बातें करते हैं ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

३६. क्या तुमको खेल देखने में (जैसे कुश्ती, फुटबाल आदि) अधिक आनन्द आयेगा अगर :
(क) तुम्हारी शर्त लगी हो कि कौन जीतेगा, (ख) अनिश्चित, (ग) तुम्हारी कोई शर्त न लगी हो ?

३७. तुम्हारे पेट में प्राय: कितनी बार दर्द होता है ?
(क) लगभग साल में एक बार, (ख) दोनों के बीच में, (ग) प्रति मास एक बार से अधिक।

३८. जब बुजुर्ग लोग तुम्हारी किसी बात में सुधार करते हैं तो क्या तुम बिना जवाब दिये उनके सुझाव सुन लेते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

३९. मित्रों से वाद-विवाद के समय क्या तुम जैसा चाहते हो निःसंकोच वैसा हरएक को बतला देते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

४०. क्या तुम प्रायः एकान्त में, अपने विचारों में खोये रहना पसन्द करते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

४१. इन पांच शब्दों को देखो : यकीन, भरोसा, सीखना, आशा और विश्वास । वह शब्द जो अन्य शब्दों से मेल नहीं खाता, वह है :
(क) आशा, (ख) यकीन, (ग) सीखना ।

४२. क्या तुम्हारी कभी-कभी यह इच्छा होती है कि जैसे व्यक्ति तुम आज हो, वैसे न होकर तुम कुछ और होते ?
(क) हां, (ख) शायद, (ग) नहीं ।

४३. जब लोग तुम्हारी उपेक्षा करते हैं तो क्या तुम्हें उनसे जलन होती है और उन पर क्रोध आता है, चाहे तुमको पता हो कि ऐसा वह लोग जान-बूझ कर नहीं कर रहे हैं ?
(क) कभी नहीं, (ख) कभी-कभी, (ग) अधिकतर ।

४४. क्या तुम कभी-कभी अपने माता-पिता (या जिन पर तुम आश्रित हो) की मृत्यु के भयानक स्वप्न देखते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

४५. साल में एक या दो बार के अतिरिक्त क्या तुम इस बात का ध्यान रखते हो कि स्कूल का अनुशासन भंग न हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

४६. प्रायः तुम शाम का समय किस प्रकार गुजारोगे ?
(क) पार्टी में हंसी-मजाक द्वारा, (ख) अनिश्चित, (ग) अपने किसी ऐच्छिक कार्य द्वारा ।

४७. क्या तुम यह अच्छा समझते हो कि लोगों की स्कूल छोड़ने की उम्र न होने पर भी उन्हें अपनी इच्छानुसार स्कूल छोड़ने की सुविधा प्राप्त हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

४८. क्या तुम हिन्दी के अध्ययन में कविता सुनना पसन्द करोगे ?
(क) हां, (ख) शायद, (ग) नहीं ।

४९. क्या तुम ऐसा अनुभव करते हो कि तुम कोई ऐसी चीज तलाश कर रहे हो जिसे कोई भी नहीं समझता या उसकी चिन्ता ही नहीं करता है ?
(क) हां, (ख) शायद, (ग) नहीं ।

५०. तुम किसकी अधिक तारीफ करते हो ?
(क) एक वायुयान चालक की जो खतरनाक उड़ानें भरता है, (ख) अनिश्चित, (ग) एक बड़े कवि और नाटककार की ।

५१. कोई पुस्तक पढ़ना शुरू करने पर यदि पुस्तक नीरस लगती है तो क्या तुम :
(क) शायद ही पूरी पुस्तक पढ़ते हो, (ख) अनिश्चित, (ग) किसी न किसी तरह समाप्त कर ही लेते हो ?

५२. गर्मियों की छुट्टी में लगभग दस-पन्द्रह दिन के लिये तुम क्या करना पसन्द करोगे ?
(क) अपने एक-दो मित्रों के साथ गांव में सैर-सपाटा करना एवं पक्षियों को देखना, (ख) अनिश्चित, (ग) किसी कैम्प में नेता के रूप में कार्य करना ।

५३. प्रति दिन तुम लगभग कितनी बार किसी कार्य को चाहते हुए भी करने से रुक जाते हो ?
(क) लगभग एक बार, (ख) दोनों के बीच में, (ग) छः-सात बार से अधिक ।

५४. क्या तुम्हें अपने मित्रों के साथ गली में खड़े होकर गप्पें मारना अच्छा लगता है ?
(क) हां, (ख) शायद, (ग) नहीं ।

५५. तुम क्या पढ़ना पसन्द करोगे ?
(क) मानव शरीर कैसे कार्य करता है, (ख) अनिश्चित, (ग) पार्टी में खेलों का प्रबन्ध कैसे किया जाता है ।

५६. प्रायः तुम क्या सुनना पसन्द करते हो ?
(क) संगीत, (ख) अनिश्चित, (ग) किसी अच्छे वक्ता द्वारा आधुनिक विश्व की समस्याओं पर भाषण ।

५७. यदि तुम्हारे आस-पास के लोग तुमसे खिंचे-खिंचे रहते हैं, फिर भी क्या तुम प्रसन्नचित्त रह लेते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

५८. जब कोई नया विद्यार्थी तुम्हारी कक्षा में प्रवेश लेता है तो क्या वह तुमको भी उतनी ही जल्दी जान लेता है जितनी जल्दी अन्य विद्यार्थियों को ?
(क) हां, (ख) शायद, (ग) नहीं।

५९. "पहनने" का जो सम्बन्ध "कपड़े" से है वही सम्बन्ध "खाने" का :
(क) भोजन से है, (ख) मेज से है, (ग) टोपी से है।

६०. जो सम्बन्ध "भूख" का "खाना" से है, वही सम्बन्ध "प्यास" का :
(क) नल से है, (ख) पानी से है, (ग) दूध से है :

६१. क्या तुम्हारे मन में कभी ऐसे विचार आये हैं कि तुम्हारा पैदा न होना ही अच्छा था ?
(क) हां, (ख) शायद, (ग) नहीं।

६२. अपनी कक्षा में किसी भी पद के लिये न चुने जाने पर भी क्या तुम्हें सन्तोष रहेगा ?
(क) हां, (ख) शायद, (ग) नहीं।

६३. क्या प्रायः तुम अपने जेब-खर्च के बचे हुए पैसे से
(क) अपने स्पोर्टस के अध्यापक को उनकी सफलता पर एक सुन्दर सा उपहार दोगे, (ख) अनिश्चित, (ग) किसी धर्मार्थ कार्य में लगाओगे ?

६४. लोगों के ऐसे प्रश्न पूछने पर जो कि उनको नहीं पूछने चाहिएं फिर भी क्या तुम उनको नम्रता से उत्तर दे देते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

६५. क्या तुम लोगों के मनोविनोद के लिए साहसिक कार्य करना पसन्द करते हो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं।

६६. क्या तुम निश्चय करते हो कि तुम जो कार्य कर रहे हो वह एक अच्छा कार्य है ?
(क) शायद ही कभी, (ख) कभी-कभी, (ग) प्रायः हमेशा।

६७. क्या तुम अपने विचारों को शब्दों द्वारा आसानी से व्यक्त कर लेते हो ?
(क) अधिकतर, (ख) कभी-कभी, (ग) कभी नहीं।

६८. जब तुमसे अपने विचारों की पुष्टि के लिए कहा जाता है, तो क्या तुम :
(क) अपने आपको बोलने में असमर्थ पाते हो, (ख) दोनों के बीच में, (ग) हमेशा उत्तर तैयार रहता है ?

६९. प्रायः कितनी बार तुम किसी बात पर इतने उत्तेजित हो जाते हो कि उस बात को दूसरों को बताये बिना तुम्हें चैन नहीं पड़ती ?
(क) शायद ही कभी, (ख) कभी-कभी, (ग) बहुत बार।

७०. तुमको यदि निश्चय हो जाये कि किसी ने तुम्हारे साथ अन्याय किया है फिर भी क्या तुम उसे आसानी से भुला देते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

७१. तुम किस काम का अधिक विरोध करते हो ?
(क) छोटे बच्चों की देखभाल करना, (ख) अनिश्चित, (ग) ऐसे लोगों की आज्ञा पालन करना जिनको वस्तुओं के बारे में तुमसे कम ज्ञान है।

७२. क्या तुम पसन्द करोगे कि स्कूल की नुमाइश में तुम्हारा कार्य :
(क) तुम्हारी अनुपस्थिति में अध्यापक द्वारा दिखाया जाये, (ख) अनिश्चित, (ग) तुम स्वयं दिखाओ ?

७३. अगर तुम मनुष्य न होते तो क्या बनना पसन्द करते ?
(क) समुद्र पर उड़ने वाली चिड़िया, (ख) अनिश्चित, (ग) घुड़दौड़ का एक घोड़ा।

७४. किसी वस्तु को खरीदने की तीव्र इच्छा होने पर क्या तुम यह समझ सकते हो कि :
(क) खरीदने से पहले यह निश्चय करलो कि वास्तव में तुम्हें उसकी आवश्यकता भी है, (ख) अनिश्चित, (ग) कुछ दिन सोचने के लिये ठहर जाते हो ?

७५. किसी बात का निर्णय करने के पहले क्या तुम छोटी से छोटी बातों पर भी ध्यान देते हो ?
(क) हां, (ख) शायद, (ग) नहीं।

७६. अगर तुम समुद्री जहाज पर हो तो तुम क्या पसन्द करोगे ?
(क) प्रत्येक बन्दरगाह पर उतर कर वहां के निवासियों से बातें करना, (ख) अनिश्चित, (ग) समुद्र में जहाज चलाना।

७७. अगर किसी नाटक में तुमको वह पार्ट नहीं मिलता जिसको तुम अच्छे और स्वाभाविक रूप से कर सकते हो तो क्या तुम चाहोगे कि :
(क) तुमको बिलकुल अलग कर दिया जाय, (ख) अनिश्चित, (ग) तुमको कोई दूसरा पार्ट दे दिया जाय ?

७८. "पढ़ाने" का अर्थ होता है :
(क) प्रबन्ध करना, (ख) बतलाना, (ग) शिक्षा देना ।

७९. एक व्यक्ति ने एक चित्र की ओर इशारा करते हुए कहा कि "मेरे कोई भाई-बहिन नहीं है, लेकिन उस व्यक्ति का पिता मेरे पिता का पुत्र है । जिस व्यक्ति के चित्र को वह देख रहा था वह :
(क) उसका पुत्र था, (ख) उसका पिता था, (ग) स्वयं है ।

८०. अन्य बहुत से लोगों की अपेक्षा क्या तुमको अकेलेपन से कम परेशानी होती है ?
(क) हां, (ख) शायद, (ग) नहीं ।

८१. घर वालों के विचार में क्या तुम अक्सर :
(क) गहरी नींद सोते हो, (ख) दोनों के बीच में, (ग) करवट बदला करते हो या नींद में बड़बड़ाते हो ?

८२. क्या तुम कक्षा में प्रश्न पूछते रहना उचित समझते हो जब तक कि बात समझ में न आ जाये और स्वयं को सन्तोष न हो जाये ?
(क) हां, (ख) शायद, (ग) नहीं ।

८३. तुम किस प्रकार किसी कठिन समस्या का हल अच्छी तरह से निकाल सकते हो ?
(क) स्वयं अपने आप प्रयत्न करके, (ख) दोनों के बीच में, (ग) माता-पिता या अध्यापक से बातचीत करके ।

८४. क्या तुम अच्छे मौसम में सोना पसन्द करते हो जबकि :
(क) खिड़कियां पूरी खुली हों, (ख) अनिश्चित, (ग) खिड़कियां बिलकुल बन्द हों जिससे बाहर का शोरगुल इत्यादि न सुनाई दे ?

८५. गली में लावारिस और भूखे कुत्ते के पिल्ले को देखने पर क्या तुम :
(क) उसे उन कर्मचारियों के आसरे पर छोड़ देते हो जो आवारा कुत्तों को पकड़ते हैं, (ख) अनिश्चित, (ग) उसे घर ले जाकर सोचते हो कि क्या किया जाये ?

८६. दूसरों की अपेक्षा क्या तुम किसी बात का निश्चय :
(क) बहुत आसानी और शीघ्रता से कर लेते हो, (ख) दोनों के बीच में, (ग) धीरे-धीरे सावधानी से करते हो ?

८७. किसी पार्टी में आमन्त्रित किये जाने पर क्या तुम हमेशा प्रसन्नता से जाते हो और निश्चित रहते हो कि तुम सब ठीक करोगे ?
(क) हां, (ख) शायद, (ग) नहीं ।

८८. क्या तुममें कोई ऐसी विशेषताएं या हुनर हैं जिनको तुमने अभी तक लोगों के सामने प्रकट नहीं किया है ?
(क) हां, (ख) शायद, (ग) नहीं ।

८९. अगर कोई अध्यापक तुम्हारे अच्छे दोस्त की आवश्यकता से अधिक आलोचना करता है तो क्या तुम अपने मित्र के पक्ष में बोलने लगोगे ?
(क) हां, (ख) शायद, (ग) नहीं ।

९०. क्या तुम अपने अध्यापकों से उन विषयों पर आसानी से बातें कर लेते हो जिनके बारे में तुम स्कूल में चिन्तित रहते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

९१. क्या तुम कभी-कभी मानसिक संघर्ष के कारण थका हुआ अनुभव करते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

९२. क्या तुम्हारी महत्वपूर्ण विषयों पर बनी योजनाएं केवल उन निकम्मे लोगों के कारण बिगड़ जाती है जो अपना स्वयं का काम नहीं देखते ?
(क) शायद ही कभी, (ख) कभी-कभी, (ग) अक्सर ।

९३. जब तुमको एक नया खेल दिखाया जाता है तो क्या तुम :
(क) ठहर कर देखते हो कि लोग कैसे खेलते है, (ख) अनिश्चित, (ग) एक दम स्वयं खेलने की कोशिश करते हो ?

९४. क्या तुम कक्षा में प्रथम आने की अपेक्षा फिल्म में काम करना अधिक पसन्द करोगे ?
(क) हां, (ख) शायद, (ग) नहीं ।

९५. किसी के गरज कर बोलने पर क्या तुम्हारी इच्छा होती है कि उसके विरुद्ध बोलो ?
(क) हां, (ख) कभी-कभी, (ग) नहीं ।

९६. बड़े हो जाने पर तुम कौनसा कार्य करना पसन्द करोगे ?
(क) विद्यालय निरीक्षक, (ख) अभी निश्चय नहीं किया है, (ग) किसी फैक्ट्री में नक्शे बनाने का कार्य ।

९७. इन पांच शब्दों को देखो : और, किन्तु, यदि, यद्यपि, अभी । जो शब्द अन्य शब्दों से मेल नहीं खाता वह है :
(क) किन्तु, (ख) अभी, (ग) यद्यपि ।

९८. जब तुम प्रसन्नचित्त होते हो तो क्या अचानक छोटी सी बात तुम्हें दुःखी बना सकती है ?
(क) हां, (ख) शायद, (ग) नहीं ।

९९. क्या तुम ऐसे मूड में आते हो जब तुम जरा भी परवाह नहीं करते कि तुम्हारे मित्र तुम्हारे बारे में क्या सोचते है ?
(क) कभी नहीं, (ख) बहुत कम, (ग) कभी-कभी ।

१००. क्या तुमको कभी भी इतना अधिक असन्तोष हुआ है कि तुमने स्वयं से कहा है कि "मैं शर्त लगाता हूं कि अध्यापकों की अपेक्षा स्कूल को मैं अच्छी तरह से चला सकता हूं ?"
(क) हां, (ख) शायद, (ग) नहीं ।

१०१. यदि तुम किसी पत्र के संवाददाता होते तो किस क्षेत्र का समाचार देते ?
(क) फिल्मी समाचार, (ख) अनिश्चित, (ग) राजनीतिक समाचार ।

१०२. तुम किस प्रकार की नौकरी चाहोगे ?
(क) जो स्थाई और सुरक्षित हो चाहे उसमें कठिन परिश्रम ही क्यों न करना पड़े, (ख) अनिश्चित, (ग) जिसमें दौड़धूप करने और उत्साही लोगों से मिलने का अवसर मिले ।

१०३. क्या तुमको थोड़े से मित्र रखना अधिक पसन्द है बजाय बहुत से मित्रों के जैसे कि अधिकतर लोगों के होते है ?
(क) हां, (ख) दोनों के बीच में, (ग) नहीं ।

१०४. क्या तुम्हारे विचार में ऐसे मेल अच्छे होते हैं जो :
(क) कठिन मेहनत और कोशिश करने की आदत डालते है, (ख) अनिश्चित, (ग) आसानी और आराम से खेले जाते हैं ।

१०५. कक्षा में बोलने के अवसर पर क्या कभी-कभी उत्तेजना के कारण तुम्हारे हाथ कांपने लगते है और दिल की धड़कन बढ़ जाती है ?
(क) हां, (ख) शायद, (ग) नहीं ।

१०६. प्रायः तुम क्या पसन्द करोगे ?
(क) संगीत सम्मेलन का कार्यक्रम सुनना, (ख) शायद, (ग) सांडों की लड़ाई देखना ।

१०७. अगर तुमको घूमने का मौका मिले तो क्या तुम :
(क) नये-नये लोगों को व उनके रहन-सहन के विभिन्न तरीकों को देखोगे, (ख) अनिश्चित, (ग) मशीनों द्वारा बड़े-बड़े कार्य एवं मनोरम दृश्य देखोगे ?

१०८. क्या तुमने आजकल या जब बहुत छोटे थे, कभी यह सोचा है कि अगर तुम कहीं सफर में खो जाओ तो क्या करोगे ?
(क) हां, (ख) शायद, (ग) नहीं ।

१०९. क्या दैनिक जीवन में तुम :
(क) एक से मूड में रहते हो, (ख) अनिश्चित, (ग) कभी-कभी अत्याधिक शक्ति और स्फूर्ति से युक्त तथा कभी-कभी एकदम थके हुए महसूस करते हो ?

११०. क्या तुम कभी-कभी बेकार की बातों से इतने चिन्तित हो जाते हो कि उन बातों से तुमको छुटकारा नहीं मिल पाता ?
(क) हां, (ख) शायद, (ग) नहीं ।

१११. क्या तुम अपने लिए उन कपड़ों इत्यादि को अधिक पसन्द करते हो :
(क) जिनका कि फैशन होता है, (ख) अनिश्चित, (ग) जो उपयोगी और व्यावहारिक हों ?

११२. जब तुम महान कार्यों के बारे में पढ़ते हो तो क्या तुम सोचते हो कि :
(क) तुम भी ऐसे ही कार्य करो, (ख) अनिश्चित, (ग) ऐसे कार्य करने के लिये अन्य लोग है ?

११३. क्या तुमको कभी-कभी इतनी घबराहट होती है कि कहीं अचानक आवाज होने पर तुम बड़ी जोर से चौंक जाते हो ?
(क) हां, (ख) शायद, (ग) नहीं ।

११४. क्या तुम निश्चित हो कि तुमने प्रत्येक प्रश्न का उत्तर दे दिया है ?
(क) हां, (ख) शायद, (ग) नहीं ।

The Jr.-Sr. H. S. P. Q., FORM .....

नाम ..... विद्यालय ..... कक्षा .....

दिनांक ..... स्त्री/पुरुष ..... अभिभावक की मासिक आय ₹० ..... आयु ..... वर्ष ..... माह

निर्देश—अपनी पुस्तिका में दिए गए प्रश्न संख्या के अनुसार नीचे के खाने (Box) में एक तद्दी का निशान (✓) लगाओ।

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